

**KNOWLEDGE RETENTION AT A PLATINUM MINE IN NORTH WEST PROVINCE  
OF SOUTH AFRICA**

**By**

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## SUMMARY

Knowledge retention plays an important role in combating organisational knowledge loss. However, some organisations, including mining companies, still lose organisational knowledge due to employees retiring, resigning, downsizing, attrition and so on. This leaves the companies with a shortage of qualified and senior, experienced employees to meet production needs, which has a negative impact on the running of the operational functions on a day-to-day basis. This qualitative study utilised the knowledge-retention model as a theoretical framework to investigate knowledge-retention strategies at a platinum mine in the North West province in South Africa. Data were collected through semi-structured interviews with 10 employees of the platinum mine in North West province who were chosen purposively, as well as organisational document review. The key findings revealed that although the mine has a knowledge-retention policy, some of the employees are not aware of its existence and there is not enough investment in knowledge-retention initiatives within the organisation. The study concludes by arguing that having knowledge retention policy, strategies and initiatives on paper but failing to implement is as good as not having it. The study recommends that management become involved, support knowledge-retention initiatives, and ensure that knowledge retention policy is implemented in the organisation.

**Key terms:** knowledge, knowledge retention, knowledge drain, knowledge management, role players' support, ICT, learning organisation, organisational culture, case study, knowledge transfer, South Africa

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Last but not least, special thanks go to my late granny Nwafungana ntombi yaka Ubisi, may your soul rest in peace.

## DECLARATION

Student no: 44324774

I declare that **KNOWLEDGE RETENTION IN THE PLATINUM MINE OF THE NORTH WEST PROVINCE OF SOUTH AFRICA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



SIGNATURE  
(MR SS MAKHUBELA)

22 May 2017

DATE

## **DEDICATION**

This dissertation is dedicated to my family and friends.

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## **ABBREVIATIONS**

AAR: After Action Review

CoP: Community of Practice

FIFO: Fly-in Fly-out

HR: Human resources

ICT: Information and communication technology

KM: Knowledge management

KR: Knowledge retention

NWPDP: North West Planning Development Plan

NWP: North West province

PGE: Platinum Group Element

SMEs: Subject matter experts

SA: South Africa

## **CHAPTER ONE**

### **INTRODUCTION AND BACKGROUND TO THE STUDY**

#### **1.1 Introduction**

Knowledge retention (KR) has become a critical challenge for many organisations around the world (Levy 2011:582). This is because organisations lose knowledge possessed by the departing employees when they take early retirement, find another job elsewhere or are poached by other organisations. Phaladi (2011) explains that many organisations are facing a crisis situation in their workforce demographics due to the increasing number of ageing experienced employees. The author argues further that the situation is complicated by the shortage of skilled, younger employees who can replace the experienced, old employees when they retire. Martins and Meyer (2012:77) state that many organisations are faced with the challenge of losing organisational knowledge and competitive advantage due to employee layoffs, retirements, staff turnover, organisational mergers and acquisitions, and competitive recruitments.

DeLong (2004:16-17) argues that the changing workforce demographics are not only part of the problem that many organisations around the world face, but there is also a looming potential brain drain that is likely to affect the strategic and operational function of the organisation. This crisis is likely to affect organisations that depend on highly trained and experienced professionals and managers to create value for the organisations (IBM Human capital management 2006). When employees leave the organisation, they take with them organisational knowledge about past research and development projects' failures and successes, resources and organisational procedures (Dube & Ngulube, 2012; Baguma, Ragsdell & Murray 2014:485). This results in the organisation being short of experienced workers to continue with the daily function of the organisation without interruptions. Brown and Galli-Debicella (2009:11) argue that many organisations fail to realise the importance of the tacit knowledge possessed by employees until they leave. The loss of experienced employees not only affects the human resource management, but also the functional operations and the capability of the organisation to engage in business activities

effectively and without problems (Sutherland & Jordaan, 2004: 57; Bairi, Manohar & Kundu 2011; 43). The challenge of change in employees' demographics and loss of organisational knowledge is not an exception to the mining industry.

According to Schultz and Grimm (2008:54), the mining industry around the world has been affected by a shortage of qualified talent to meet its production needs. The authors also explain that there are more employees leaving the mining industry to pursue job and career opportunities than entering the industry. Mills (2012:2) asserts that the crisis confronting the global mining sector arises due to the shortage "of young people entering the sector is beginning to have a real impact and is likely to affect mine production adversely for the foreseeable future." Some of the reasons identified as causes for this trend include "the general image of the industry, declining numbers of graduates from mining programmes, and the draining of talent and knowledge as a result of mining industry turn-over and retirement" (Schultz & Grimm 2008:54).

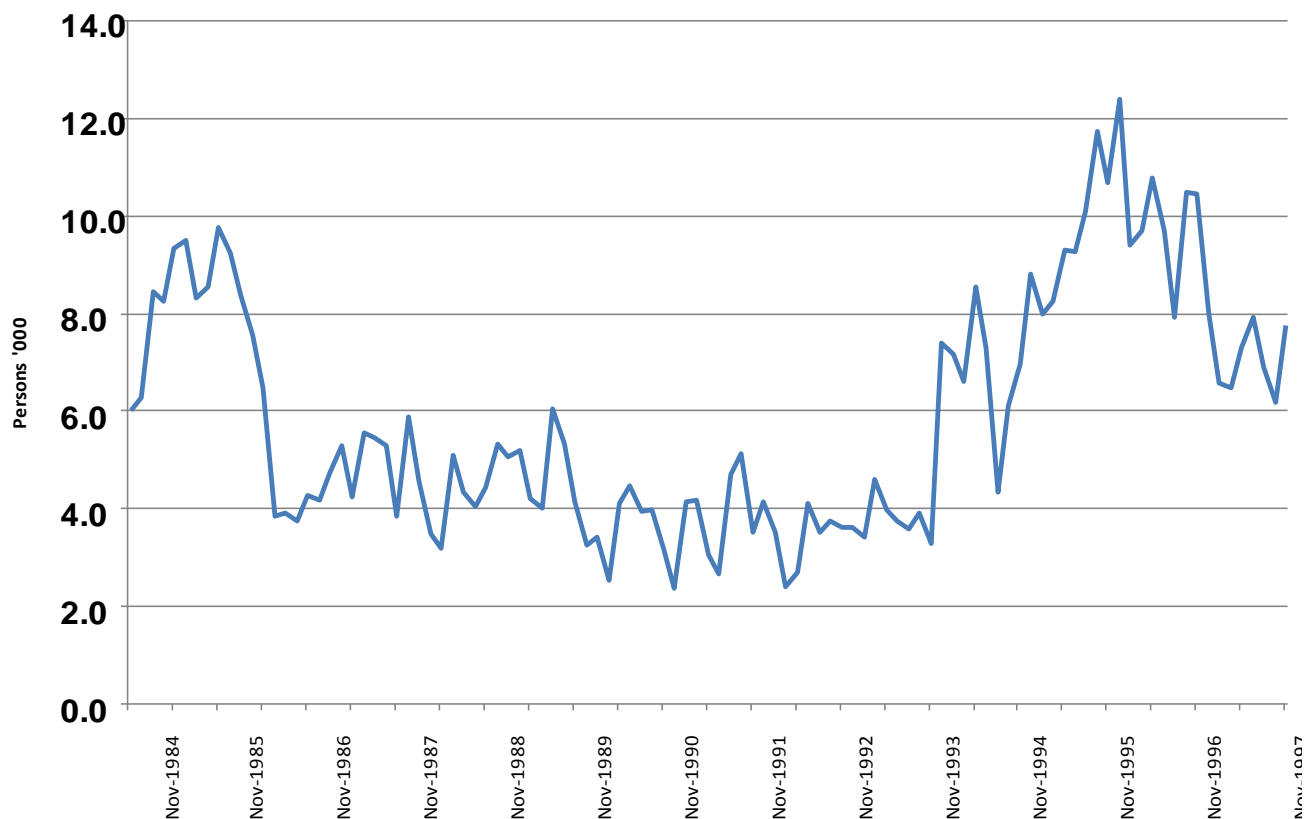
The situation is similar in South Africa. For, example, Musigwini, Cruise and Phillips (2013:235) state that the mining industry in South Africa "faces a skills shortage in many of the technical disciplines such as geology, mining engineering, metallurgical engineering, chemical engineering, electrical engineering, mechanical engineering, analytical chemistry and mine surveying". These disciplines are necessary to ensure the mining industry's future health, despite it being a major source of employment. Brown and Galli-Debicella (2009:11) declare that the new and young employees who are entering the field do not possess the skill sets needed to replace the retiring employees. The knowledge loss resulting from employee turnover exposes the mining industry to considerable risk because departing employees often leave with rare and difficult to imitate knowledge and critical knowledge about whom they know (Whelan & Carcary 2011:681).

Sutherland and Jordaan (2004:56) argue that the organisation's ability to retain knowledgeable workers is a critical component in determining its present and future success. If the organisation does not retain employees' knowledge, it will not be able to learn from the experience and reinvent the wheel continuously (DeLong 2004; Martins & Meyer 2012:79). As retaining employees is not always feasible and does not provide a solution to the problem of knowledge loss faced by many organisations

around the world, it is important that organisations should retain or capture the knowledge possessed by experienced employees before they leave the organisation. Martins and Meyer (2012:79) suggest that knowledge retention could be regarded as a solution to combating knowledge loss by keeping possession of, continuing to have and practising and recognising knowledge that could be lost to the organisation. This can help the organisation maintain a competitive advantage (Bender & Fish 2000:130; Whelan & Carcary 2011:677) and foster innovation, improve efficiency, effectiveness and productivity (Dube & Ngulube 2013:1).

### **1.1.1 The global mining situation**

The mining industry demographics show that mass retirements will take place over the next decade and a large number of skilled staff will be required to design and operate mining operations in Australia (Dickie & Dwyer 2011). This problem is also prevalent in other parts of the world. According to Kowalski, Vaught, Brnichi, Mallet, Rethi, Steiner and Wiehagen (2007), the majority of the American workforce is close to retirement age and without the right mix of employees to replace the retiring employees, companies “are at risk of not being able to carry out their missions” and deliver services. The authors further note that Germany is also facing a shortage of highly skilled professionals, scientists, technicians due to an ageing and shrinking workforce. The mining industry not only reflects this international trend of the ageing, soon to retire workers, but also the shrinking workforce, with a lack of younger employees to take over from the retiring employees. This is highlighted by the demographics of the workforce in the South Australian mines as shown in Figure. 1.1.



**Figure 1.1: Persons employed in mining, South Australia, by quarter, 1984 to 2010, '000** (Spoehr & Molloy 2011:3)

According to Spoehr and Molloy (2011), employment in the South Australian mining industry has fallen from a peak of around 12 000 people in 2007 to around 7 700 people in November 2010. The challenge of a shrinking workforce in the Australian mining industry has been summarised in a graph below where it shows the fluctuation of the workforce over the years.

The shortage of mining and metals skills has prompted some companies to consider resources in other sectors with similar or complementary skills, such as oil and gas, engineering, construction and manufacturing (Ernest & Young 2013). For instance, in an attempt to respond to the shortage of experienced employees, Germany has resorted to hiring skilled employees from other countries to meet the demand for a labour force in the mining industry. According to Ernest and Young (2013), the skills shortage is also affecting countries such as Canada, Indonesia, Brazil, Chile, Peru and Mozambique. Apart from Mozambique, there are also other African countries that are affected by the shortage of skilled employees in the mining industry – as discussed in section 1.1.2.



### 1.1.2 Africa's mining industry situation

According to a report by Felix (2013), African mining firms are struggling to fill vacancies from basic tasks to complex project management, due to the lack of qualified staff. For example, the infant large-scale mining sector of Tanzania is characterised by a skills deficit acknowledged by the government (Mjimba, 2011:52). In order to mitigate the skills deficit, the mineral policy of Tanzania was proposed for the establishment of training institutions to address this problem. Tanzania has a number of training institutions offering both generic and specific mining-related training. There are three institutions offering specific mining industry-related education in Tanzania (the University of Dar es Salaam, the Madini Institution in Dodoma & Integrated mining) (Mjimba 2011:52). It is reported that even with these training efforts, mining-related experience and skills were said to be deficient (Mjimba 2011: 53). The skills deficit is also not uncommon in Zambian companies. The four mining companies in Zambia invest in technical training, managerial training, scholarships, and apprenticeships for employees and contractors, and support for human capital development indirectly by providing support to trade schools (Chamber of Mines in Zambia 2014: 8). These initiatives attempt to address the challenge of skills gaps in mining organisations in Zambia.

Another African country that is affected by the shortage of experienced employees is Rwanda. Rwanda is one of the developing countries that is experiencing a skills shortage in the mining industry. According to the *Rwanda skills survey report* (2012), Rwanda mining establishments are still small, but fast growing and face a tough challenge because of the lack of qualified technicians and artisans. It is also reported that the sector will continue to recruit (import) skilled labour in mining engineering, geology, environmental studies, metallurgy and geotechnical engineering from overseas, the closest sources being the DRC, Tanzania, Zambia, South Africa and Australia. This shows that a skills shortage is a global problem that affects African countries as well. South Africa is also not an exception with regard to this global issue of skills shortage. The *Rwanda skills survey report* (2012) states that South Africa is one of the sources from where skilled employees are recruited, which leaves South Africa with a shortage of a labour force in the mining sector due to foreign recruitment and talent poaching by other countries.

### **1.1.3 The South Africa mining situation**

It was reported that in 2009, the mining sector employed about 548 000 workers (MQA 2011:10). This number includes both permanent and contract workers. However, the mining industry still faces a skills shortage in many of the technical disciplines that are necessary to ensure its future health, despite it being a major source of employment (Musingwini, Cruise & Phillips 2013:235). Jordaan and Barry (2009: 174) argue that approximately 12 500 artisans are needed per year in South Africa to meet the demand, whereas the statistics show that approximately 3 000 artisans pass the trade test every year (Van Rooyen, Du Toit, Botha & Rothmann 2010:2). The authors further note that artisan retention is particularly important, not only because the country is facing a critical shortage of artisans, but also because the average age of artisans is 54 years and 70% of employees are near retiring age. This is a clear indication that retaining the employees is not the solution to the current situation the mining industry is facing. What mines can do is retain the knowledge that employees possess.

There is also concern about the difficulties of fly-in fly-out (FIFO), as an ongoing lifestyle in the mining industry. This situation is prompted by a shortage of skilled employees and the high demand that comes with it. Artisans are employed for a year or few years and move to other companies where they are promised large salaries and other incentives. Van Rooyen et al. (2010) observe that artisan retention in South Africa is crucial with regard to infrastructure development, economic growth and wealth creation. However, it seems highly unlikely that the South African mining industry will have sufficient artisans due to factors such as the immigration of skilled employees to Europe, ageing, lay-offs and employee poaching by other companies (Van der Berg, 2010). Stacey, Hadjigeriou and Potvin (2009) assert that “large numbers of mining personnel, including many key skills, have recently been attracted to other mining countries, particularly Australia, to satisfy the skills shortages in those countries.” This has left South African mining companies with a shortage of labour and experienced employees to carry on with their daily operations. South Africa has many mining companies across the country. However, the study will focus on how a platinum mine in North West province is affected by the shortage of experienced employees and how the knowledge is retained in the organisation.

### 1.1.4 Background of North West province and the discovery of platinum mines in South Africa

This section provides a general overview of North West province and briefly discusses the discovery of platinum in South Africa. It starts with the province and concludes with the way platinum was discovered in South Africa.

#### 1.1.4.1 Overview of the North West Province

North West province has 3.5 million residents, which constitutes 9.5% of South Africa's total population (North West Planning Development Plan 2013:11; Credit Guarantee 2010). The majority of the province's residents are the Tswana people who speak Setswana, and other smaller groups that include Afrikaans, Sotho and Xhosa speaking people. The core economy of the North West province is based on mining that generates more than half of the province's gross domestic product and provides jobs to many residents in the province. It is also known as the Platinum Province due to the vast amount of platinum minerals found in the bush complex of Northwest (NWPDP 2013). The map in Figure 1.2 shows the lay-out of NWP.



Figure 1.2 Map of North West Province (South Africa)

Glaister and Mudd (2010:440) mention that North West province hosts the Bushveld complex, a large igneous complex about 370 kilometers east-west and up to 240 km north-south. The Platfield report (2005:20) indicates that the Bushveld complex of South Africa is host to one of the richest Platinum Group Element deposits in the world.

#### ***1.1.4.2 The discovery of platinum in South Africa***

There is no specific date regarding when platinum was discovered in the Bushveld complex in South Africa. Cawthorn (2006:130) argues that the discovery of platinum in South Africa has a reference to “platina” identified and displayed by prospector Dick Hart in Church Square in Pretoria and the event was reported to Pretoria newspaper *Die Volkstem* on 27 July 1885. However, Mr Bettel William (a chief chemist at the Robertson gold mine in Johannesburg at the time) was credited with being the first to identify platinum when he analysed a concentrate that contained “silver, gold, platinum and iridium” in 1890 (Cawthorn, 2006:130). In turn, Scoon and Mitchell (2009:16) claim that Merensky was first to sample and assay rocks from the eastern limb of the Bushveld in 1904. The authors further posit that the discovery of the Platinum Group Element (PGE) association particles in the Bushveld dates back to 1906 by William Bettel. Cawthorn (2006:130) states that the geological sample was collected encompassing an area of 130 km by 75 km around Pretoria and that the display of the sample had little impact on the mining community at the time. According to Glaister and Mudd (2010:440) In 1906 Mr William Bettel discovered platinum (Pt) “in situ” from the Bushveld complex. The authors also note that the discovery sparked two decades of exploration and research for the platinum.

Scoon and Mitchell (2009:16) argue that all the attempts made did not constitute the discovery of the platinum until in 1923 when the nickel-rich Vlakfontein pipes and chromitite showed some resemblance to the deposits in the Russian Urals. The Platified report (2005:8) argues that the PGE bearing Merensky Reef was first identified on the farm, Maandagshoek, north of Steelpoort in South Africa in 1924. Similarly, Cawthorn (2006:132) states that in 1924, Andries Lombaard, a farmer in the eastern Bushveld sent Merensky (a chemical analyst) an “aspirin bottle” containing a white concentrate panned from a stream on his farm, Maandagshoek, to be analysed to determine whether it was platinum or not. The author further mentions that the

Merensky analysis indicated that the concentrate was indeed platinum. Jones (1999: 525) states that since the identification of economic deposits of platinum in South Africa in 1924 by Hans Merensky, a number of platinum mines have come and gone, while some have changed names. Surujlal et al. (2014:175) note that mining operations commenced at the Rustenburg Platinum mines in 1931. Since, commencement of operation in the mines, many people have worked and retired while others moved on to other companies.

Hence, this study utilised the knowledge-retention model as a theoretical framework to investigate knowledge retention in the platinum mine in North West province. The research objectives' themes derived from the theoretical framework of the study are knowledge-retention strategies; information communication technology (ICT); knowledge-retention initiatives; support and learning culture. The knowledge retention model is discussed in detail in section 2.

## **1.2 Statement of the problem**

Many organisations, including the mining industry, face the challenge of workforce diversity, the ageing workforce, generational differences, talent identification and retention in the era of skills shortage. The loss of employees as a result of resignations, lay-offs, retirements and relocations has considerable cost implications for the organisation as it leads to the loss of knowledge. Nagadevara (2012:70) maintains that the loss of employees in the organisation results in increased costs such as the cost of having a position remaining vacant, hiring a new person, training the new person, the loss of knowledge and productivity. Similarly, Aiman-Smith, Bergey, Cantwell and Doran (2006) stress that the situation could be worse if not enough skilled and experienced employees are left in the organisation to continue with the day-to-day functions of the organisation without any disruptions. The Deloitte report (2013) indicates that mines continue to face critical frontline and professional skills shortages that affect day-to-day operations.

Similarly, Schultz and Grimm (2008:4) share the sentiments highlighted in the Deloitte report (2013), namely that, globally, the mining industry is affected by the shortage of qualified and experienced employees to meet its production needs. This is a challenge

many mining organisations have to deal with. Levy (2011:582) argues that knowledge retention has become the main challenge faced by many organisations around the world as a result of demographic change and attrition. Therefore, it is necessary to establish how the North West Province Platinum mine retains knowledge of the employees who resign or retire from the company in order to continue with day-to-day operations without disruptions.

### **1.3 Purpose and objectives of the study**

The purpose of the study was to investigate knowledge retention at a platinum mine in North West province. The objectives are to:

- identify knowledge-retention policies, strategies and procedures at a platinum mine in North West province
- identify technologies used in knowledge retention at the platinum mine in North West province
- determine the role players in knowledge retention at the platinum mine
- assess the promotion of learning culture at the platinum mine in North West province
- make recommendations about knowledge retention at the platinum mine.

### **1.4 Research questions**

Research questions provide an explicit statement of what it is that the research wants to know about (Bryman, 2012:10). The author explains that research questions are important in the research process because they help the researcher to focus precisely on the important issues that the research wants to address. According to Bryman (2012:11), research questions help with guiding the literature research, with decisions about the kind of research design to employ, which data to collect and from whom, analysis of the data, the writing up of the data and provide the reader with a clear sense of what the research is about.

Therefore, the following research questions will be posed to fulfil the study purpose:

- Which knowledge-retention strategies and procedures have been adopted to address the potential loss of knowledge by Platinum mine in North West province?
- Which technology does the platinum mine use to capture and store the retained knowledge in the organisation?
- Who are the role players on knowledge retention in the platinum mine?
- Is there any promotion of a learning culture at the platinum mine?

**Table 1.1: Objectives, research questions, research method, population and research instruments**

<b>Objective</b>	<b>Research question</b>	<b>Research method</b>	<b>Population</b>	<b>Research instruments</b>
To determine knowledge-retention policies, strategies and procedures that are in place at Platinum Mine in North West	Which knowledge-retention policies, strategies and procedures have been adopted to address the potential loss of knowledge by Platinum Mines in North West?	Case study	Employees	Interviews & document analysis
To determine the role players for knowledge-retention at Platinum Mine of North West	Who are the role players for knowledge-retention at Platinum Mine of North West?	Case study	Employees	Interviews & document analysis
To Identify the technologies used for knowledge retention	Which technologies do the platinum mine use to capture and store the retained knowledge in the organisation?	Case study	Employees	Interviews & document analysis
To assess the promotion of learning culture at the platinum mine in North West.	Is there any learning culture promotion at the platinum mine?	Case study	Employees	Interviews & document analysis



## **1.5 Significance of the study**

Retention of the knowledge of experienced employees is a critical economic resource and a core element in achieving significant competitive advantage due to its rarity, relevance and non-substitutability (Dube & Ngulube, 2013:1; Dewah, 2012). Similarly, Schmitt, Borzillo and Probst (2012:53) also argues that a sustainable competitive advantage is based on exploitation, exploring and retaining a firm's knowledge. In line with the arguments given above, the importance of this study is to highlight some critical aspects associated with losing organisational knowledge due to employees' retirements, resignations, lay-offs and other factors. This study will also add to other studies undertaken about knowledge retention in South Africa.

This study is important because it will shed light on the knowledge-retention practices the platinum mine employs when experienced employees leave the organisation. It is also hoped that the findings of the study and recommendations will help the platinum mine to minimise the loss of organisational knowledge and devise strategies that will help the organisation maintain its competitive advantage.

## **1.6 Delimitation and scope of the study**

This study only focused on a platinum mine in North West province. This platinum mine was chosen because it is one of the largest platinum mines in South Africa and the world. It should be noted that the mining company opted to remain anonymous; hence, it is not identified by a name. Throughout the study, it will be referred to as a platinum mine. . A similar study by Squier (2003) also did not identify the context of the study.

This study covered the following concepts, knowledge retention, knowledge-retention policy, drivers of knowledge retention, strategies for knowledge retention, the role of human resources (HR) and leadership support on knowledge retention in the organisation, leadership support, the use of ICTs in knowledge retention and learning and organisational culture. The construct of the study is based on knowledge-retention model by Doan, Rosental-Sabroux, and Grundstein (2011), which is dealt with in more detail in Chapter Two. The constructs helped to frame the objectives of the study, as well as themes for literature review.

## **1.7 Definition of terms**

Definition of terminology helps clarify the confusion or misinterpretation with regard to the terms in particular context. The following section defines the key terms used in this study.

### **1.7.1 Knowledge**

Knowledge is defined as “a fluid mix of framed experience, values, contextual information, and expert insight that provide a framework for evaluating and incorporating new experiences and information” (Davenport & Prusak, 2005:4). According to Noe (2008), “knowledge refers to what individuals or teams of employees know or know how to do (human and social knowledge) as well as a company’s rules, processes, tools and routines (structured knowledge).” Knowledge is an essential strategic resource for an organisation (Nonaka & Takeuchi, 1995).

#### **1.7.1 1 Tacit knowledge**

Drucker (2001), cited in Nelson and McCann, (2010:2), defines knowledge as “embodied in a person; carried by a person; created, augmented, or improved by a person; applied by a person; taught and passed on by a person; used or misused by a person.” Busch (2008:35) explains that tacit knowledge is that component of “knowledge that is widely embodied in individuals but not able to be readily expressed.” According to Calo (2008:410), tacit knowledge is typically “informal, less definable and uneasily transferable because it resides in the minds and experiences” of employees. The author further argues that tacit knowledge is also referred to as a person’s “know-how” and “informal and hard-to-pin down skills”. Busch (2008:38) postulates that tacit knowledge comprises skills, experiences, insight, intuition and judgement. It is typically shared through discussion, stories, analogies and person-to-person interaction; therefore, it is difficult to capture or represent in explicit form. Becerra-Fernandez, Gonzalez and Sabherwal (2004) explain that “tacit knowledge draws from personal experiences and gives an individual foresight and the awareness to make “Gut-level” decisions” and is specific to the person who possesses the knowledge. “Tacit knowledge is normally acquired on the job” and is regarded as a competitive advantage within companies because of its uniqueness and the potential

it has to enhance productiveness and innovation (Ambrosini & Bowman 2009:40; Busch 2008).

### **1.7.1.2 Explicit Knowledge**

Explicit knowledge is regarded as codified knowledge articulated in words, figures and numbers (Nelson & McCann, 2010). The authors further explain that it is objective and easy to share in the form of specification, standard operating procedures and data. Similarly, Nonaka and Konno (1998), regard explicit knowledge as the tangible ideas that consist of numbers or words shared in the form of data. According to Calo (2008:410), explicit knowledge is: typically clear, traceable and unequivocal; it comes in the form of documents, databases, policy and procedure manuals, which makes explicit knowledge readily transferable within an organisation or between individuals without the loss of meaning.

The explicit knowledge approach holds that knowledge is something that can be explained by individuals even though some effort and some form of assistance sometimes may be needed to help individuals articulate what they know (Sanchenz, 2005:6). Holste and Fields (2009:129) are also of the view that explicit knowledge is easily articulated or reduced to writing and is often impersonal and formal in nature. It includes documents, reports, white papers, catalogues, presentations, patents, and formulas. Arif, Egbu, Alom and Khalfan (2009:93), postulate that the explicit knowledge created should reflect the best practice within the alliance group, show shared ownership and be easily understood outside its linguistic, organisational and cultural context. Sanchenz (2005:6) believes that the true usefulness of explicit knowledge can be manifested or realised when formal organisational processes are used to articulate it and are structured in a manner that will make for easier dissemination within the organisation. Similarly, Doan et al. (2011:2) asserted that explicit knowledge “can be articulated, codified, and stored in certain media and can be readily transmitted” to other employees within the organisation. Arif et al. (2009:100) explain that it is a kind of knowledge that can be “recorded and allows people to find it and use it.”

According to Bairi et al. (2011:43), knowledge is the basis that inform effective action or decision-making in a particular context (organisation). The authors argue that the

loss of knowledge might lead to the decreased capacity for effective action or decision-making within an organisation. The loss of knowledge can occur in an organisational or functional group, small group or individual level. Bairi et al. (2011:44) contend that there is confusion in any discussion of knowledge loss within an organisational context. The confusion emerges as a result of the lack of clarity about the kind of organisational knowledge that can affect productivity or performance if that knowledge is lost. The authors note that there are four different types of knowledge interacting at all times, which are human knowledge, social knowledge, cultural knowledge and structured knowledge. The loss of any of this knowledge might affect organisational effectiveness.

### **1.7.2 Knowledge retention**

Knowledge retention is an act of maintaining, not losing the knowledge that exists in the minds of people and knowing that it is vital to the organisation's overall functioning (Martins & Meyer, 2012:80). In this study, knowledge retention will be used to refer to the strategies that an organisation uses to capture the knowledge of the employees on a daily basis and those who are about to leave the organisation due to retirement, resignation, lay-off and so on.

### **1.7.3 Knowledge management**

Knowledge management refers to all managerial efforts to facilitate activities of acquiring, creating, storing, sharing, diffusing, developing and deploying knowledge by individuals and groups. It is the process of enhancing company performance by designing and implementing tools, processes, systems, structures, and cultures to improve the creation, sharing and use of knowledge (Noe 2008:204).

## **1.8 Research methodology**

A research methodology provides a framework for the collection and analysis of data (Bryman 2012:40). This section discusses the research approach and research method employed in this study. It also provides a brief overview of the data collection

methods, the population of the study and sampling procedures. These aspects are dealt with comprehensively in Chapter Three.

### **1.8.1 Research approach**

Creswell (2009:4) states that there are three types of research approaches namely qualitative, quantitative and mixed methods research. This study will use qualitative research approach as informed by the research questions and objectives.

### **1.8.2 Research methods**

A research method provides a framework for the collection and analysis of data (Bryman 2012:46). The author states that a research method involves a specific instrument, such as a self-completion questionnaire or a structured interview schedule or participant observation whereby the researcher listens to and watches others. Creswell (2009:15) describes a research method as plans and the procedures for data collection, analysis, and interpretation that researchers employ for their studies. Bryman (2012:50) explains that there are five research designs: experimental design, cross-sectional design or survey design, longitudinal design, case study design and comparative design. He also states that the choice of which method to employ is dependent upon the nature of the research problem. Similarly, Mohd-Noor, (2008:1602) explains that the suitability of research method derives from the nature of the social phenomena to be explored. Hence, case study will be used as research method for this study.

### **1.8.3 Data collection method**

Creswell (2009:175) explains that qualitative researchers tend to collect data in the field, at the site where participants experience the issue or problem under study, through examining documents, observing behaviour or interviewing participants. A qualitative case study can be accomplished by using quantitative and /or qualitative methodologies (Dooley 2002:338). The author also explains that a case study research can employ various data collection processes such as participant observation, document analysis, surveys, questionnaires and interview. Therefore, the

current study will use interviews and content or document analysis as a data collection method.

#### **1.8.4 Population of the study**

Population is defined as all units or things possessing the attributes which form the focus of the study (Keyton, 2006:119). Hammond and Wellington (2013:173) also define population as the entire group from which the sample is selected. The target population for the current study is the experienced employees of a platinum mine in North West province. The sample of ten people was chosen purposively from different departments (HR, talent management, engineering & IT department) in the organisation.

#### **1.9 Data analysis**

Data analysis entails categorising, ordering, manipulating and summarising data to find answers to the research questions (Ngulube, 2005:138). Keyton (2006:90) is of the view that data analysis is the process of labelling and breaking down raw data to find patterns, themes, concepts, and propositions that exist in the dataset. The data collected from the participants were transcribed on Microsoft word and analysed manually.

#### **1.10 Ethical issues**

Ethics are associated with morality and being able to distinguish between what is wrong and what is right (Babbie, 2001:471). With regard to research ethics, the researcher has to comply with certain ethical requirements when he or she undertakes a research project. The Unisa Policy on Research Ethics (2007) states that:

it is important to notify the identified sample population, before they are requested to participate in the study, of the aims, methods, anticipated benefits of the research study; their rights to abstain from participation in the research and their rights to terminate at any time; the confidential nature of their replies, and assure them of their privacy, and autonomy.

Keyton (2006) emphasises the importance of confidentiality concerning the participants, which entails that any information the participants provide should be controlled in such a way that others do not have access to it. Therefore, the researcher also vowed to maintain the privacy of the participants and respect participants' rights to participate or not at any stage of the study. The organisation requested to remain anonymous due to instability in the mining industry at the moment. The researcher vowed to maintain the anonymity of the platinum mine in this study. Similar studies carried elsewhere such as Squier (2003) also maintained the anonymity of the organisations.

### **1.11 Structure of the thesis**

The study consists of six chapters. Chapter One provides an introduction and background to the study, statement of the problem, the purpose of the research, definition of concepts used in the study, and overview of the research approach.

Chapter Two presents the literature review of this study. The following concepts are discussed in detail: knowledge retention, knowledge-retention policy, knowledge-retention strategies, role players and leadership support of knowledge-retention initiatives, the role of ICT in knowledge retention and organisational learning, and culture.

Chapter Three discusses the research approach and method used in this study.

Chapter Four presents the data findings and analysis.

Chapter Five entails data interpretation and discussion of the findings as presented in chapter four.

Chapter Six is the summary of research findings, conclusion and recommendation.

### **1.12 Summary**

This chapter provided an overview of the study. It started with the introduction to and background of the study proceeded with global and South African context of the mining industry and presented the problem of the study, the aims and objectives, definitions of the key concepts, the research approach and method, and significance of the study,

ethical issues and structure of the thesis. The next chapter (Chapter Two) presents the literature review of the research topic.

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## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

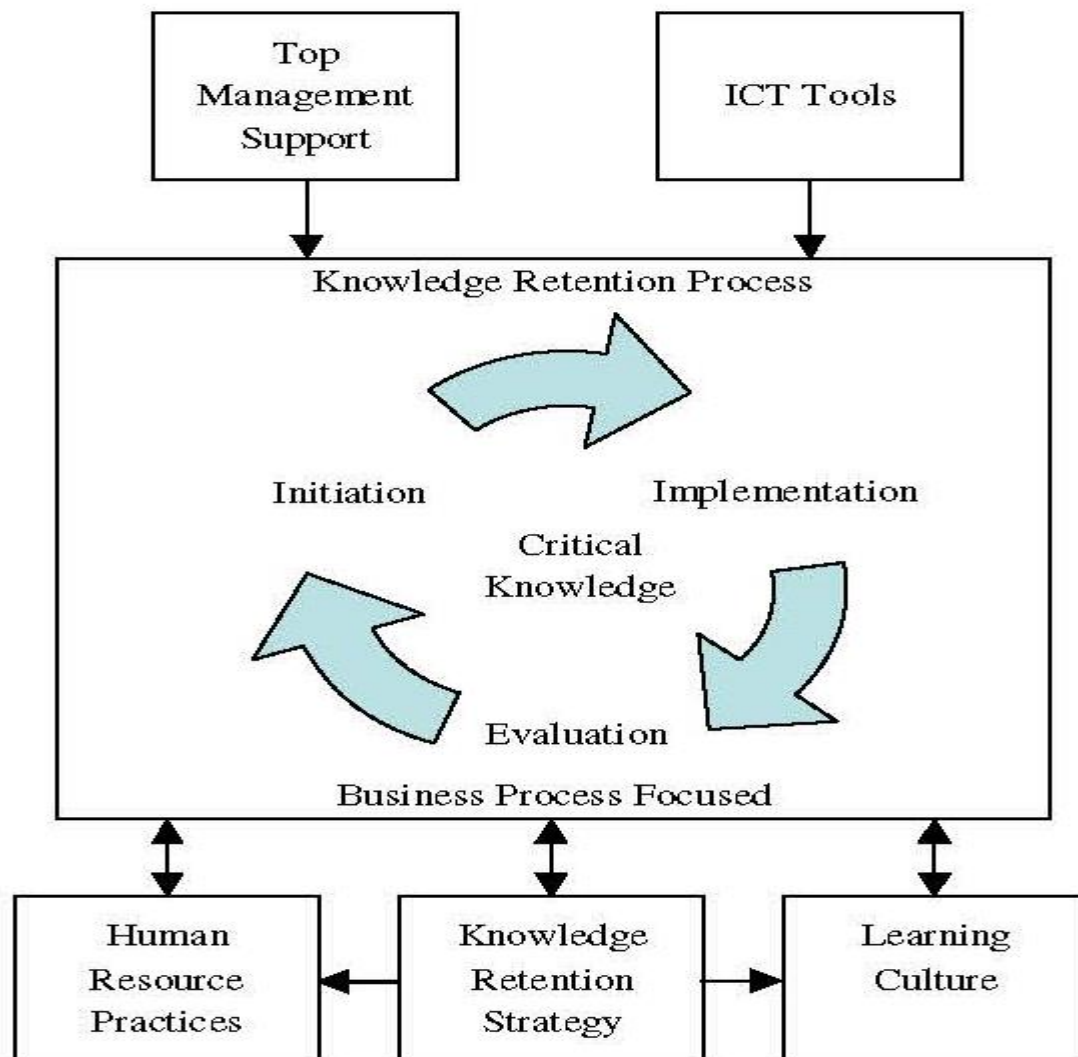
The preceding chapter (Chapter One) introduced the research problem that deals with knowledge loss through demographic changes and gave a general background of the mining industry particularly at the platinum mine in North West province. This chapter presents a literature review on knowledge retention in general. In this regard, Leedy and Ormrod (2010:66) argue that a literature review describes the theoretical perspective and previous research findings regarding the research problem. The authors note that a literature review assists in obtaining more knowledge about the topic. Bryman (2012:98) states that the reason for reviewing literature is that one wants to know what is already known about the topic in order to identify the gaps and avoid re-inventing the wheel.

Knowledge retention is a subset/sub-discipline of knowledge management that deals with the retention or capturing of experts' knowledge before they leave the organisation after long periods of service (Levy 2011:582). Doan et al. (2011:3) note that knowledge retention is an important part of knowledge management. It also deals with challenges that knowledge management methodologies do not focus on (Levy, 2011:582). Numerous studies have been done on knowledge sharing, knowledge management and knowledge transfer in various organisations and contexts.

This study will focus on knowledge retention in the platinum mine in North West province. This chapter will discuss the following concepts: 'knowledge concepts,' 'knowledge retention,' 'the role of HR in knowledge retention in an organisation,' 'knowledge-retention drivers,' 'knowledge-retention strategies,' 'organisational/learning culture,' 'leadership support,' 'use of ICTs in knowledge retention' and the 'knowledge-retention policy.' First, the theoretical framework utilised in this study is discussed.

## 2.2 Theoretical framework

This study is based on the knowledge-retention model by Doan et al. (2011) as reflected in Figure 2.1. The constructs used in this study that helped to frame the objectives of the study include ICT tools, human resources practices, strategies for knowledge retention, as well as learning culture.



**Figure: 2.1 The knowledge-retention model** (Source: Doan et al. 2011)

Doan et al. 2011 argue that an adaptive and agile organisation will likely survive and have competitive advantage over its competitors. The knowledge-retention and transfer techniques can be used to capture, share and possibly create knowledge before employees leave the organisation or when the organisation appoints new employees to inform them of everything they need to know as quickly as possible.

Hence, knowledge retention is an area that holds great potential for organisations in terms of reducing the costs associated with staff turnover and sustaining business performance. The model outlines key elements that are critical for fostering and facilitating the knowledge-retention process within the organisation.

### **2.3 Knowledge loss that can affect organisational performance**

As discussed in section 1.7.1, there are different categories of knowledge that falls within tacit and explicit knowledge such as human knowledge, social knowledge, cultural knowledge and structured knowledge. This knowledge can affect the organisational performance if it is lost.

**Human knowledge** constitutes what individuals know or know how to do (Bairi et al. 2011:44). Human or individual knowledge is manifested in the form of skills or expertise. According to Massingham (2008:543), the value of human knowledge in an organisation is realised by its potential to enable employees to complete duties, create new knowledge and solve problems. The author argues that the loss of human knowledge has an impact on both the organisational output and organisational productivity.

**Social knowledge** is the form of knowledge that only exists in the relationship between individuals or within teams (Bairi et al. 2011:44). For example, a senior rigger ropes man with an extensive network consisting of a high-performing team of rigging ropes men , reflects the presence of social knowledge embedded in that network. If the senior rigger ropes man leaves the rigging team, the team might be affected because the new senior rigger ropes man might not know who the high-performing employees are and whom to contact in case of a crisis. Massingham (2008:543) explains that social knowledge is largely tacit, shared by team members and evolves only as a result of working together. Bairi et al. (2011:44) posit that high levels of trust and an ability to collaborate effectively reflect the presence of social knowledge.

**Cultural knowledge** reflects a collective understanding of how things are done in a particular firm. Bairi et al. (2011:44) describe cultural knowledge as collective knowledge that is shared more broadly across an organisation. If an account manager

leaves, he or she takes away a valuable set of relationships with clients, but the departure does not affect the cultural knowledge of the unit. However, if most of the programme leaders leave at once, this collective knowledge could also be affected (Bairi et al. 2011:44).

**Structured knowledge** is embedded in an organisation's systems, processes and tools (Bairi et al. 2011:44). Knowledge in this form is explicit and rule based. Bairi et al. (2011:44) argue that a key distinction between structured knowledge and other types of knowledge is that structured knowledge is assumed to exist independently of employees. Massingham (2008: 544) posits that structured knowledge enables an organisation to reuse the knowledge repeatedly. The author also states that employees rely on it for guidance when they do not know what to do or how to complete a task.

## **2.4 Knowledge retention**

Doan et al. (2011:3) point out that the main focus of knowledge retention is “on the critical knowledge that is at risk of loss, prioritizing what is at risk based on potential knowledge gaps” and the impact that it might have on the overall organisational performance and then develop action plans to retain that knowledge. Martins and Meyer (2012:80) define knowledge retention as an act of maintaining and not losing the knowledge that exists in the minds of people and knowing that it is vital to the organisation's overall functioning. The authors further assert that knowledge retention encompasses all the systems and activities that capture and preserve knowledge and allow it to remain in the organisation. Dewah (2012) notes that knowledge retention is the process of capturing the knowledge and expertise of retiring or departing employees.

According to Dewah (2012), the retention of knowledge of the experienced employees is a critical economic resource and a core element in achieving a competitive advantage. Although, Dube and Ngulube (2013) concur with Dewah (2012) that knowledge retention is critical to organisational success, they also argue that not all knowledge in organisations is worth retaining. The authors argue that the knowledge

that warrants retention is that which gives an organisation an edge in terms of competitive advantage due to its rarity, relevance and heterogeneity.

Dewah (2012) states that managers and organisational experts depart with the knowledge of organisational culture, knowledge of the day-to-day operations of the organisation, knowledge of the past successes and failures within the organisation and knowledge of the awareness of what went into the planning and decision-making that have formed the organisation into what it is today. An organisation that fails to manage knowledge is at risk of not responding positively either to the challenges of the competitors or to the economic instability. Nelson and McCann (2010) assert that retaining employees' knowledge that has high competitive value is becoming a critical and well-recognised challenge.

Martins and Meyer (2012:79) state that organisations need to focus on developing a formal retention strategy to retain critical and highly specialised knowledge in the organisation when the employees leave the organisation. This strategy would help to prevent any detrimental effects on the business success and survival of the organisation. The authors also assert that the organisations need to pay attention to the issue of knowledge loss and attrition by determining where the risks are and then implementing a knowledge-retention strategy. Dewah (2012) also states that when senior experienced employees leave without handing over guidance or work procedures, the job performance of successors often does not equal that of the retiree or the experienced employee leaving. Therefore, knowledge retention should focus on the critical knowledge that is at risk of being lost and action plans should be developed to retain that knowledge.

According to Baguma et al. (2014:487), there are three kinds of knowledge retention approaches that some of the organisations employ when they are faced with the challenge of knowledge loss due to retirement, resignations, lay-offs, etc. They suggest that there is a reactive approach, a short-term approach and a long-term approach.

- The reactive or ad hoc approach is a circumstance prompted action. This can usually be divided into two sections. In the case of employees leaving due to

resignation, only an exit interview will be conducted. In the case of retiring, restructuring or lay-off, formal processes to capture knowledge from the employees leaving at the time of their departure will be followed. According to Baguma et al. (2014: 487), this kind of knowledge retention usually starts three months before the retirees leave the organisation. However, the authors also point out that it is highly unlikely that most of the valuable knowledge possessed by retirees will be retained due to time limits.

- The short-term or proactive approach is a medium-term knowledge-retention approach that offers a better solution than a reactive strategy for capturing knowledge from someone who retired for a period of one to three years before he or she is eligible for retirement (Liebowitz, 2008; Levy 2011). This strategy provides a better opportunity or more time to explore almost all the facets of the knowledge possessed by the person who retired and ensures that the knowledge is captured well.
- The long-term or visionary approach is a long-term strategy where knowledge retention is planned from the onset. Levy (2011) proposes that knowledge retention should start immediately an employee has been recruited and continues until he or she retires or resigns. This strategy focuses on managing the knowledge possessed by employees by capturing it and converting that knowledge into organisational knowledge on a day-to-day basis depending on the organisation's need (Baguma et al. 2014: 487).

According to Walsh and Ungson (1991) cited in Bairi et al. (2011:46), knowledge retention consists of three activities, namely, knowledge acquisition, storage and retrieval.

- “Knowledge acquisition describes the practices, processes and tools used to move knowledge into a state where it is kept available for future use” (Bairi et al. 2011:46). This can be achieved through capturing expert

knowledge on the database on how to complete a specific task or through a young employee or successor being mentored.

- Storage represents the processes and facilities used to keep knowledge and information until it is needed (Bairi et al. 2011:46). The authors explain that storage entities include individuals, groups, culture, work processes, tools and systems.
- According to Bairi et al. (2011:46) “knowledge-retention retrieval includes behaviours, routines and processes used to access and reuse information and knowledge in new situations. This can be done by means of searching a database for an expert, calling a colleague, remembering a past experience, brainstorming within a group and searching a document in a database.”

## **2.5 Knowledge retention policy**

According to Yamamoto (2011:3550), retention is regarded as all the human resource management policies for retaining the current and expected high-performing employees within organisations for long periods of time, thereby enabling them to exercise or develop their capabilities. Dube and Ngulube (2013:1) argue that knowledge retention is a multifaceted component of an organisation’s human resource strategies to retain expert, critical knowledge and to maintain a competitive advantage. Liebowitz (2008:1) also notes that strategic human capital management refers to the HR preparedness for workforce development and succession planning in terms of having the human talent available and educated in order to meet the organisation’s strategic mission and vision.

However, the challenge facing HR currently is addressing the issue of knowledge loss in organisations. According to Nwokocha and Iheriohanma (2012:198), “the fast-changing competitive business environment occasioned by globalisation has presented evident challenge before Human Resource professional.” Yamamoto (2011:3550) also contends that organisations are at greater risk of losing capable HR employees to other organisations due to greater employment fluidity, increased job

changes and intensified competition for securing capable high-performing individuals. Whelan and Carcary (2011: 681) argue that the problem has a bearing on the change in the psychological contract between employees and employers as is seen in generation Y employees demonstrating lower loyalty and changing organisations more frequently. Similarly, Nwokocha and Iheriohanma (2012:198) argue that “the challenge is driven by the concerns of employee loyalty, corporate restructuring efforts and tight competition for key talents.” Nelson and McCann (2010:2) assert that retaining employees whose knowledge has a highly competitive value, is becoming a critical and well-recognised challenge.

Liebowitz (2008:1) explains that strategic human capital management has been an important area in recent years within the government, industry and academia with regard to finding ways to retain both the employees and the knowledge of the experienced employees. Daghfous, Belkhodja, and Angell (2013:641) state that HR literature has studied knowledge loss from an employee turnover perspective with greater emphasis on motivation and a rewards system as a means of reducing knowledge loss in an organisation. From a human resource perspective, the emphasis is more on retention of the carrier of knowledge (employees) than on the knowledge itself. Liebowitz (2008:1) also highlights the fact that HR employees placed an emphasis on job attitudes such as job satisfaction and organisational commitment as the determining factors for employees staying in one company for a long time. This does not entirely address the issue of knowledge loss. Again, this approach can be ascribed to the traditional job description of HR.

According to Doan et al. (2011: 5-6), the human resource practices consist “of five main constructs: staffing, job design, performance appraisal systems, reward” and compensation systems and training and development. The authors describe HR duties as follows:

- Staffing refers to the extent to which companies consider person-environment fit to ensure congruence of individual and organisational values and goals that will facilitate knowledge sharing among employees when conducting recruitment and selection procedures.



- Job design refers to the degree to which employees will be assigned to positions that are consistent with their skills and abilities since it can influence worker's motivation and opportunities to use their knowledge.
- A performance appraisal system refers to the extent to which companies evaluate individual performance when considering knowledge sharing ability as of the main performance criteria.
- Reward and compensation systems refer to the degree to which people who are involved in knowledge transfer activities will be recognized and rewarded.
- Training and development refer to the extent to which employees will be provided opportunities for personal growth and career development.

Dube and Ngulube (2013:2) state that employees leave organisations for many reasons such as career improvement, retrenchment and retirement. Due to these factors, Liebowitz (2008) contends that knowledge-retention strategies should be implemented or incorporated into the organisation from the beginning because you do not know when someone will leave or take early retirement. Martins and Meyer (2012: 68) observe that some of the forward-thinking companies already experiencing skills shortages and:

knowledge loss are changing by approaching the issue from an HR perspective focusing on testing new and creative recruitment, retention, workforce career planning and retirement solutions to ensure that the talent and knowledge needed for continued productivity are in place.

Accordingly, Thilmany (2008) asserts that, in order to prevent valuable knowledge accumulated on the job from getting lost in the transition, HR professionals at many companies, should adopt different mechanisms “to retain employees’ know-how and best practices so that the knowledge” can be passed on to the future employees. Thomas (2009) expound that for knowledge retention to occur, the organisation’s workplace environment and culture that encourages and supports knowledge transfer should be institutionalised. The authors further explain that all HR professionals should be aware and understand demographic changes and how demographic issues such

as ageing workforce impact on the development and implementation of effective HR policies and practices.

## **2.6 Drivers of knowledge retention**

Daghfous et al. (2013:644) argue that various companies are exposed to different drivers of knowledge loss and use different strategies for the retention of knowledge. Knowledge retention is prompted by the changing workforce demographics and economic instability. According to Stevens (2010:79), the ageing workforce is a reflection of declining birth rates and the greying of the baby-boomer generation. The author further states that the shifting workforce demographics are having a notable effect on organisations across a variety of industries and geographies. Equally, Whelan and Carcary (2011:681) claim that knowledge retention is influenced by the economic downturn, workforce lay-offs and demographic changes. Stevens (2010:79) posit that an increasing number of retiring employees leaving with organisational knowledge can place organisations at risk. The author further explains that challenges for other organisations include maintaining a productive workforce in the face of potential shrinking labour pools and the increased mobility of the younger generation of employees. Wamundila and Ngulube (2011) maintain that if knowledge is not managed and retained, organisations stand to lose valuable knowledge that can have detrimental effects on organisational operations. Wamundila and Ngulube (2011:2) argue that drivers of knowledge loss are:

- Changing workforce demographics and profiles
- Employee turnover and mobility
- Lack of knowledge documentation

### **2.6.1 The generational drivers of knowledge loss**

The generational class may impact heavily on knowledge loss in an organisation. This can be experienced when a particular generation of employees reaches retirement age and leaves the workplace and the new generation of employees takes over from the earlier generation (Haynes 2011:99). The authors also note that the changing demographic trends mean that there is a possibility that a multi-generational workforce

may work together at a particular point in time as shown in Table 2.1. This may create complexity as each generation has its own expectations and requirements.

**Table 2.1: Generation description**

Generations	Birth-Year
Matures	1922-1945
Baby Boomers	1946-1964
Generation X	1965-1980
Millennials	1981-2000

Source: Haynes 2011

#### ***2.6.1.1 Traditionalist/matures (1922-1945)***

Mature workers are more concerned with the quality of work they produce than with extrinsic rewards such as money (Rood, 2010:99). They do not like to challenge authority, are extremely loyal, consistent and conforming (Stevens 2010: 79). This generation is described as the “most comfortable with conformity and a top-down management style” (Stevens 2010: 79) and is motivated by “verbal or written recognition, awards, and public acknowledgement” (Haynes, 2011: 99&100). Haynes (2011:100) avers that the traditionalist/mature generation represents a supervisor’s dream employee.

#### ***2.6.1.2 Baby boomers (1946-1964)***

According to Haynes (2011:100), baby boomers have extremely good work ethics, are passionate, respect authority and hierarchy, live large and want to be in charge, are financially driven and are happy to abide by the rules and are resistant to change. Stevens (2010:79) also argue that baby boomers exhibit commitment to their work and this includes loyalty to the employer. The author states that this generation is associated with optimism, team orientation and personal gratification. The baby boomers’ primary focus is on work and they are rewarded for their loyalty and commitment.

#### **2.6.1.3 Generation X (1965-1980)**

According to Haynes (2011:100), "Generation X is described as independent in comparison to the first two generations." Haynes (2011:100) asserts that generation X employees have more commitment to their own careers than to their organisations, as they value skills development and productivity highly. Due to their independence, they are regarded as disloyal and do not care much about corporate politics. Stevens (2010:79) state that generation X is the first to be affected by corporate lay-offs and the economic recession, therefore, they do not find building relationship with upper management beneficial. Busch, Venkitachalam and Richards (2008: 47) note that generation X is expected to graduate from formal education and work their way up the company ladder one step at a time. They are rewarded for receiving career opportunities and having autonomy.

#### **2.6.1.4 Millennial generation (1981-200)**

Young employees are sceptical of institutional relationships. The millennial generation is expected to change jobs every few years and is far less interested in the corporate ladder (Rood 2010:85; Haynes, 2011: 100). According to Yu and Miller (2005), cited in Rood (2010:100), employee retention is a critical challenge facing many organisations with a large number of young employees. Busch et al. (2008: 47) contend that generation Y is not motivated in the same way as generation X. Rood (2010:100) explains that the millennial generation works to live as opposed to lives to work. The author further explains that the millennial generation seeks instant fulfilment, instead of engaging in a long-term investment of time and effort. Busch et al. (2008:47) note that generation Y is less interested in the corporate ladder and need motivation to stay in one company or the same position for a long time.

Busch et al. (2008: 46) argue that organisations rely on experienced employees to take up management positions and, at the same time, junior employees should learn from the experienced employees and gain their own expertise through addressing workplace challenges. Based on the above-mentioned knowledge loss drivers, it is evident that the knowledge and expertise of employees do not necessarily remain at the disposal of organisations permanently (Ghahfarokhi & Zakaria, 2009:344). Hence, the retention of competencies and documents requires the systematic management

of knowledge, where adequate methods are used to bring the critical retained knowledge back into the organisation.

### **2.6.2 Implication of employee turnover and mobility**

Employee turnover can be seen as the movement of employees out of the organisation and it is costly to replace exiting or retired employees and it affects operational performance (Iqbal 2010:275; Samuel & Chipunza 2009:411; Van Rooyen et al. 2010:1). Iqbal (2010:275) indicates that there are two types of staff turnover: employees usually initiate a voluntary turnover, while an involuntary turnover is created by the organisation. An involuntary turnover is divided into discharge and downsizing. A discharge turnover is aimed at the individual employees due to a discipline or job performance problem, while a downsizing turnover occurs as part of an organisation restructuring or cost-reduction programme to improve organisational effectiveness and shareholder value (Iqbal 2010:276). A voluntary turnover is divided into either a preventable or an unpreventable turnover.

A preventable turnover refers to that which an organisation can avoid by increasing employees' salary or deploying them to new job assignments (Samuel & Chipunza 2009:414). An unpreventable turnover occurs in certain circumstances such as an employee's death or family/ spouse relocation. Iqbal (2010:278) asserts that a high staff turnover can affect the productivity, quality and profitability at firms of all sizes immensely. Van Rooyen et al. (2010:2) assert that "preventable artisan turnover has been a cause for serious concern in organisations for some time now, but few organisations have made an active effort to investigate why artisans are leaving the organisation." It is anticipated that organisations will also recruit more aggressively from each other (Van Rooyen et al. 2010:2). Whelan and Carcary (2011) argue that any form of employee turnover (whether through competitor head-hunting, redundancies or retirements) exposes an organisation to considerable risk.

### **2.6.3 Lack of knowledge documentation**

DeLong (2004:89) notes that documenting is the practice that can be used to codify and preserve explicit knowledge when time is of the essence (when the employee is

leaving the following month, for example). According to KNOCO (2008), having knowledge documentation in place helps the organisation to document the knowledge of the departing experts or employees fully, such as working models, approaches, tips and hints, effective practices in knowledge of people and of reference sources. Wamundila and Ngulube (2011: 5) state “documenting relevant operational knowledge has been advocated in order to mitigate attrition challenges and aid in the learning period for new employees.” This is the type of knowledge that can supplement existing manuals or documents and provides guidance for people who follow on (KNOCO: 2008).

DeLong (2004:89) argues that documenting for future use should be an ongoing process and not a way of capturing knowledge at the last minute. DeLong further contends that many documentation processes are faulty or non-existent and neglected until the lost knowledge threatens organisational operations.

Levy (2011:588) asserts that the knowledge documented has to be integrated into the natural IT organisational environment for easy access and retrieval by current and new employees in the future. Levy (2011) also stresses that it is helpful to add summaries to each document so that the new employees may know what is in those documents. This may help the generation Y especially who tend not to open documents if they do not know how helpful the document could be.

## **2.7 Knowledge-retention strategies**

The impact of attrition can be reduced by making use of appropriate knowledge-retention approaches to capture knowledge in the organisation. The knowledge-retention approaches or strategies include mentorship and apprenticeship programmes, knowledge maps, a community of practice, videotaping, repositories, storytelling programmes and the use of subject matter experts (Thomas 2009; Dewah 2012). Knowledge can be retained in an organisation through various strategies that may involve education, training, a community of practice and professional networks, documenting the processes and use of advanced software to capture the work processes (Wamundila & Ngulube, 2011), best practices, case studies and job manuals (Kelleher 2006). According to Dewah (2012), most of the knowledge in

organisations exists in the form of tacit knowledge gained and built up through years of experience. The author further argues that this knowledge has to be captured and stored in the organisations' repositories such as databases, documents, software and by embedding it in processes, products and services, thereby transmitting the existing knowledge throughout the organisation.

Doan et al. (2011:3) contend that knowledge-retention strategies improve innovation, organisational growth, efficiency, employee development and competitive advantage. However, the organisations need to determine the technical, procedural, social aspects that will be employed in the debriefing process (Kelleher 2006). The strategy and technological devices will be based on how best to ensure that other employees in the organisation can access the retained knowledge in ways that are meaningful to them.

### **2.7.1 Communities of practice**

Jeon, Kim and Koh (2011:252) define a community of practice (CoP) as a group of people bound together informally by shared expertise and passion for a joint enterprise. Similarly, Dewah (2012) describes communities of practice as groups of people who share a concern, a set of problems or who are passionate about a particular topic and who interact persistently with each other to expand their knowledge and expertise in a particular area of concern. Jeon et al. (2011:253) state that organisations have realised the benefits and roles that a CoP plays in an organisation. As a result, the CoPs are linked with a business strategy and are supported. Cloete and Sandrock (2009) argue that CoPs are used to share work-related knowledge and experience and engage in a collective process of learning. The authors further explain that, in some organisations, the retiring and retired experts are often valuable members of communities of practice and still share their knowledge as consultants.

Dewah (2012) shares the views expressed by Cloete and Sandrock (2009) that some organisations rely on CoPs to retain the knowledge of the retiring or leaving experts back into the organisation. Cloete and Sandrock (2009) propose that the sharing of knowledge needs to be part of the culture in the organisation where experts are invited

to present talks in forums and communities of practice to share their expertise and by doing so, the knowledge will be transferred to the remaining employees.

### **2.7.2 Mentoring and apprenticeship**

Mentoring and apprenticeship programmes can be used as a strategy for transferring tacit knowledge from experienced employees to junior employees (Dewah, 2012:96). Similarly, Whelan and Carcary (2011:682) also express the view that mentoring promotes the direct transfer of critical tacit work-related knowledge from experienced employees to a protégé and can increase an individual's social capital by exposing him or her to the mentors' social network. Mentorship entails the pairing of an experienced member of staff with a new employee to assist the new employees in acquiring new knowledge and skills to operate (Beazley, Boenisch & Harden, 2002 cited in Dewah 2012). Mentoring and tutoring techniques enable senior employees to transfer their knowledge, wisdom, specific insights and skills to their juniors within a short period of time so that when the experienced employees leave the organisations or die, the organisation's substantive practices, knowledge, history, stories and culture are preserved (Rusanow, 2004; Dubin 2005 cited in Dewah 2012; Thilmany 2008). This practice can enhance employee motivation and commitment through achieving a relational psychological contract between the employer and the employee (Whelan & Carcary 2011: 682). Shadowing programmes involve training interns to map the work processes and interview the experts to determine how they make decisions, on which experiences they base their decision-making and with whom they network (Cloete & Sandrock 2009). These mechanisms ensure that even if a key knowledge worker leaves the organisation, his or her knowledge is retained through its transfer to other employees. Mentors have the opportunity to share their knowledge, experience and insight into how to get things accomplished, give back to the organisation, build trust through increased communication and be recognised as one of the outstanding mentors (Liebowitz 2008:18). Liebowitz (2008) further notes that mentors have an opportunity to see the impact of their efforts on the professional and personal growth of their mentees when they learn from others while on the job. This contributes to knowledge retention, as it is a mechanism for passing on knowledge from one person to another.



### **2.7.3 Subject matter experts**

Mannie, Van Niekerk and Andendorf (2013: 4) are of the view that subject matter experts are more likely to be recognised, empowered and are used to share and retain knowledge among employees in the organisation as a whole. Subject matter experts demonstrate mastery of particular topics or jobs and play a key role in knowledge management in organisations because of their ability to answer questions, provide a historical perspective and offer solutions to the problems that other employees are experiencing (APQC 2011). It is proposed that effective succession planning of experts is desirable to encourage the retention of knowledge and expertise (Dewah 2012). In some organisations, SMEs are assigned mentorship and apprenticeship duties, identifying core knowledge for their communities, answering questions and teaching internal courses as instructors (APQC 2011; Dewah 2012).

### **2.7.4 Storytelling**

Whyte and Classen (2012: 950) argue that a challenge for many organisations is to devise strategies and systems for eliciting tacit knowledge from the experienced employees. The authors further explain that due to the nature of tacit knowledge, the approaches to this challenge are varied from one organisation to another. Hence, some organisations adopted storytelling as a means of eliciting tacit knowledge from experts. Dewah (2012) is of the view that stories are effective in bridging generational gaps, communicate vital information about an organisation's culture and help employees develop a sense of organisational identity.

According to Liebowitz (2008:20), oral histories provide excellent mechanisms for building the institutional memory of the organisation by capturing the knowledge of "grey beards" before they retire. The author further states that stories are instrumental for knowledge sharing and collaboration. Importantly, the retention of tacit knowledge through storytelling will require one-on-one interaction (Thilmany 2008).

### **2.7.5 After action reviews (AARs)**

After action reviews (AARs) is a professional discussion forum focusing on past events or projects with an attempt to know what worked well, what went wrong and how to fix things to ensure that things do not go wrong again in future (Liebowitz 2008:23; USAID 2006). The USAID (2006) developed the following questions and criteria for conducting AARs:

- Is it a dynamic, candid, professional discussion of an event/task which focuses on the results of the event or task?
- Does it identify the means to sustain what was done well, as well as recommendations for improving shortfalls?
- Does it require everyone's participation as these insights, observations or questions will help the team identify and correct deficiencies or maintain strengths?

AARS help provide reflective practitioners in terms of understanding better why events succeeded or failed. They can be a useful mechanism for knowledge retention and transfer.

### **2.8 Role players and leadership support of knowledge-retention initiatives**

An organisation's knowledge strategy is "the overall approach an organisation intends to take to align its knowledge resources and capabilities to the intellectual requirements of its strategy" (Nelson & McCann, 2010: 4). One of the factors that help with employees participating in knowledge-retention initiatives in the organisation is when the leaders or top management support it. Doan et al. (2011: 309) describe top management support as "the degree to which top managers acting as role models when participating in knowledge-retention activities and establishing all the necessary conditions for the knowledge-retention process as well as will to provide additional resources if considered necessary." Leaders are seen as the best weapons for retaining valued talent. The authors propose that the leadership and performance management systems should establish the importance of knowledge to its operations. Nelson & McCann (2010:4), explain that knowledge worker retention is enhanced when they see that their top leaders understand, value and support the development

and active management of their intellectual capital through structures, processes, and systems.

Basford, Offermann and Wirtz (2012:202) argue that supportive leaders or supervisors can help with the reduction of the staff turnover by encouraging employees to stay in organisations for a long time because of the involvement with and assistance to the leaders. Supportive supervisors may be attracted to organisations with a reputation that they have highly supportive senior leaders and supportive leaders may be more likely to hire supervisors that they believe share their core values regarding supportive staff (Basford et al. 2012: 203). Whelan and Carcary (2011:678) stress that organisations need to support and provide a context for employees to share the knowledge freely with other employees. The authors further note that strategies for enhancing knowledge creation include practising relevant leadership behaviours such as providing the vision and support for innovation and cultivating an organisation learning culture.

## **2.9 The use of ICTs in knowledge retention**

ICT is a broad subject concerned with technology and other aspects of managing and processing information and it deals with the use of electronic computers and computer software to convert, store, protect, process, transmit and retrieve information (Jamwal & Padha 2009). Dewah (2014:8) notes that ICTs impact heavily on the way organisations function and play a vital role in the knowledge society. The key implementation of IT technology in knowledge management is computer-based knowledge management systems as much of the knowledge is held tacitly by individuals. The researchers have also attempted to abstract or convert it into explicit forms that are amenable to formal representation (Dalkir 2011:253). The ICT tools are developed to facilitate communications among individuals or employees.

According to Dewah (2014:9), knowledge is important for business survival and in this regard ICTs play a critical role in the success of any enterprise in the competitive world. The author further states that for most knowledge management systems, the use of appropriate and user-friendly information technology aids management and retention. Dalkir (2011:253) explains that technology is one of the key elements in knowledge

management processes in today's information-intensive business world. Jamwal and Padha (2009) posit that in knowledge projects, technology mainly refers to specially designed software and hardware for capturing, storing and sharing knowledge. The authors also argue that without an integrated strategic approach, it will be both difficult to receive the full benefits of ICT driving the socio-economic development cycle and to avoid the pitfalls. In turn, ICT tools refer to the extent to which ICT applications can be used to facilitate the process of knowledge retention (Jamwal & Padha 2009).

Therefore, appropriate strategies and approaches should be developed to capture employees' expertise and retain it in an organisation before the employees leave; it is imperative that the organisation use relevant and current user-friendly technologies to capture knowledge that is compatible with other software and technologies.

## **2.10 Organisational culture and learning influences on knowledge retention**

Dube and Ngulube (2012:72) describe an organisational culture as the shared assumptions that an organisation learns to create a unique culture that reflects the organisation's identity over time, both visibly and invisibly. An organisational culture entails the collective perceptions, practices, beliefs and values shared by employees with regard to appropriate behaviour in the workplace (Al-Alawi, Al-Marzooqi & Mohammed 2007; Ajmal & Koskinen, 2008:10; Zheng, Yang & McLean 2009:762). According to Schmitt et al. (2012:64) an organisational culture denotes a shared common frame of reference that employees acquire socially and transmit and provide rules for organisational behaviour. Ajmal and Koskinen (2008:10) describe culture as holistic, historically determined and socially constructed knowledge, which exists at various levels in the organisation and is manifested in all aspects of organisational life. Each organisation has its unique culture that develops over time to reflect the organisation's identity in two dimensions, namely visible and invisible (Al-Alawi *et al.* 2007). The visible dimension of culture is reflected in the espoused values, philosophy and mission of the firm while the invisible dimension lies in the unspoken set of values that guide employees' actions and perceptions in the organisation. Similarly, Dube and Ngulube (2012:72) posit that a visible dimension of culture comprises values, and the philosophy and mission of that culture, while the invisible dimension is manifested in

the form of set values that guide employees' actions and perceptions in the organisation.

According to Erwee, Skadiang & Roxas (2012:90-9) "Organisational culture is essential enabler for an effective knowledge culture with trust identified as the single most powerful culture dimension in the process." The authors explain that the organisational culture is characterised by employees that are actively encouraged to use the organisation's knowledge, make contributions to its knowledge and form close working relationships between employees to improve performance. Al-Alawi et al. (2007:28) argue that each organisation has its unique culture, which develops over time to reflect the organisation's identity. The culture of an organisation may differ from organisation to organisation but there are factors that form the basis of organisational culture success. Without these factors, it is not easy for any organisation to succeed in its endeavour.

### **2.10.1 Organisational culture success factors**

The success of an organisational culture depends on human dimensions (Al-Hakim & Hassan 2012:32). The authors contend that organisational culture characteristics, such as trust, make a significant contribution to the success of any new project or system introduced into the organisation. Al-Alawi et al. (2007:28) point out that there is a broad range of organisational cultural success factors such as trust, communication between staff, information systems, reward systems and organisation structures that contribute to the success of the organisation.

#### **2.10.1.1 Trust**

Interpersonal trust or trust between co-workers is an essential attribute in the organisational culture that is believed to have a strong influence over knowledge sharing. Interpersonal trust is known as an individual or a group's expectancy in the reliability of the promise or actions of other individuals or groups (Politis 2003, cited in Al-Alawi et al. 2007). Team members require the existence of trust in order to respond openly and share their knowledge.

#### **2.10.1.2 Communication between staff**

Communication refers to human interactions through oral conversations and the use of body language while communicating. Human interaction is greatly enhanced by the existence of social networking in the workplace. This form of communication is fundamental in encouraging knowledge transfer (Smith & Rupp 2002, cited in Al-Alawi et al. 2007).

#### **2.10.1.3 Information systems**

Information systems refer to an arrangement of people, data and processes that interact to support daily operations, problem-solving and decision-making in an organisation (Whitten et al. 2001 cited in Al-Alawi, et al. 2007). Organisations use different information systems to facilitate knowledge sharing through creating or acquiring knowledge repositories, where employees share expertise electronically and access to shared experiences becomes possible for other staff.

#### **2.10.1.4 Reward systems**

Employees need a strong motivator to share knowledge. It is unrealistic to assume that all employees are willing to offer knowledge easily without considering what may be gained or lost as a result of this action. Companies should consider the importance of collaboration and sharing the best practices when designing reward systems. The idea is to introduce processes in which sharing information and horizontal communication are encouraged and indeed rewarded. Such rewards must be based on the group rather than on individual performance.

#### **2.10.1.5 Organisation structure**

Traditional organisation structures are usually characterised by complicated layers and lines of responsibility with certain details of information reporting procedures. Managers realised the disadvantages of bureaucratic structures that slow the processes down and provide constraints concerning information flow.

The organisational culture is a deciding factor in employee retention. Nelson and MacCann (2010:4) argue that strategically proactive HR units create corporate

cultures that support innovation and creativity. The authors maintain that a culture that values interpersonal relationships and collaboration, team orientation and respect for people has been shown to result in a longer tenure. The presence of supportive values and beliefs that encourage employee inquisitiveness and creativity, a willingness to learn from error and an openness to sharing knowledge are viewed as a significant contribution to a learning organisation culture (Lee-Kelly, Blackman & Hurst 2007, cited in Nelson & MacCann, 2010:4). Schmitt et al. (2012:57) argue that organisational culture's processes and structure have also been found to be critical for combining and to leverage individual knowledge retention. Schmitt et al. (2012:59) argue further that the departing of employees does not only risk destroying valuable organisational knowledge at individual and social network levels, but may also disrupt established procedures, routines and the organisational culture.

## **2.11 Summary**

This chapter presented literature review on the ways that knowledge retention is perceived and applied in various organisations. It discussed knowledge, knowledge retention, knowledge-retention policy, knowledge-retention drivers, knowledge-retention strategies, role players and leadership support on knowledge-retention initiatives, the role of ICT in knowledge retention, and organisational culture concerning knowledge retention.

The literature review revealed that knowledge retention is critical for the success and survival of organisations in this globally competitive age. However, there are still different perspectives on knowledge retention between scholars and human resource management. The literature revealed that from the scholars' perspective, knowledge (tacit) retention possessed by employees is emphasised more than the carrier of the knowledge (employees), while the HRM is more inclined to retain the employee than the knowledge possessed by leaving employees. These differences impact on the way in which knowledge retention is adopted and implemented in different organisations. The next chapter discusses the research methodology used in the current study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The previous chapter reviewed the literature related to this study. The concepts of knowledge, knowledge-retention policy, strategies and drivers of knowledge retention, the role players on knowledge retention, the use of ICT on knowledge retention, and organisation and learning culture were discussed in Chapter Two. This chapter discusses the research methodology and methods used in conducting this research.

Seale (2004:13) explains that a research methodology clarifies all the rules and procedures of data collection and analysis. Furthermore, a research methodology in a study is extremely important, because it explains how the investigator went about conducting the entire study. As a result, this chapter discusses the research approaches, methods, sampling procedures, instruments of data collection, how data were analysed and ethical considerations observed in this study.

#### **3.2 Research approaches**

Creswell (2007:3) argues that research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis and interpretation. According to Creswell (2009:4), there are three types of research approaches, namely qualitative, quantitative and mixed methods research.

Babbie and Mouton (2011:53) define qualitative research as an attempt to study human action from the insider's perspective. The goal of qualitative research is describing and understanding rather than the explanation and prediction of human behaviour. Similarly, Creswell (2014) describes qualitative research as an approach used for exploring and understanding the meanings individuals or groups ascribe to social or human problems. Whereas, Bryman (2012:380) defines qualitative research as a research strategy that usually emphasises words rather than quantifications in data collection and analysis.



According to Leedy and Ormrod (2014:142), qualitative research serves the following purposes:

- Descriptive, it can reveal the multifaceted nature of certain situations, settings, processes, relationships, systems or people.
- Interpretation, it enables a researcher to gain new insight about a particular phenomenon, develop new concepts or theoretical perspectives about the phenomenon and discover problems that exist.
- Verification, it allows a researcher to test the validity of certain assumptions, claims, theories or generalisation within real-world contexts.
- Evaluation, it provides a means through which a researcher can judge the effectiveness of particular policies, and practices, or innovations.

Creswell (2014) defines quantitative research as an approach that seeks to test objective theories by examining the relationship among variables. The author also states that the variables can be measured, typically with instruments so that numbered data can be analysed using statistical procedures. Similarly, Bryman (2012:35-36) describes qualitative research as a

research strategy that emphasises the quantification in the collection and analysis of data and that entails a deductive approach to the relationship between theory and research in which the accent is placed on the testing of theory; has incorporated the practice and norms of the natural scientific model and of positivism in particular; and embodies a view of social reality as an external, objective reality.

According to Babbie and Mouton (2011:49), quantitative research has the following features:

- It places the emphasis on the quantification of constructs. The quantitative researcher believes that the best way of measuring the properties of phenomena is through quantitative measurement.
- A related topic concerns the central role of variables in describing and analysing human behaviour.
- The central role afforded to control for sources of error in the research process.

According to Ngulube and Ngulube (2015:1), mixed methods research (MMR) is regarded as a third methodological movement, which involves the utilisation of quantitative and qualitative approaches within a single study. Creswell (2014: 4) defines MMR as an “approach to inquiry, involving collecting quantitative and qualitative data, integrating the two forms of data by using distinct designs that may involve philosophical assumptions and theoretical frameworks”. The author further explains that the emphasis of combining quantitative and qualitative approaches provides a more complete understanding of the research problem than either approach alone. Leedy and Ormrod (2014: 268) add that MMR involves not only collecting, analysing and interpreting both qualitative and quantitative data, but also integrating conclusions into a cohesive whole.

**Table 3.1: Features of qualitative, quantitative and mixed methods research**

<b>Quantitative methods</b>	<b>Mixed methods</b>	<b>Qualitative methods</b>
Predetermined	Both predetermined and emerging methods	Emerging methods
Instrument-based questions	Both open- and closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, census data	Multiple forms of data drawing on all possibilities	Interview data, observation data, document data, and audio-visual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretations

**Source: Sarantakos 2013**

As indicated in section 1.8.2, the qualitative research approach was adopted to investigate how organisational knowledge was retained when the employees leave the organisation due to retirement, resignations, lay-offs and organisational restructuring. The retention of knowledge of the experienced employees is a critical economic resource and a core element to achieve a significant competitive advantage due to its rarity, relevance and non-substitutability (Dube & Ngulube 2013; Dewah 2012). Similarly, Schmitt et al. (2009:53) also argues that sustainable competitive advantage is based on exploitation, exploring and retaining a firm’s knowledge. In line with the arguments given above, the importance of this study is to highlight some critical aspects associated with losing organisational knowledge due to employees’ retirement, resignation, lay-offs and other factors. This study will also add to other

studies undertaken about knowledge retention in South Africa. From the review of literature (Dube & Ngulube 2013; Martins 2010; Dewah 2012), similar studies that looked at knowledge retention in different organisations also employed a qualitative research approach to conduct such studies.

### **3.3 Research method**

Creswell (2014:247) defines research methods as a type of inquiry within qualitative, quantitative and mixed methods approaches that provide specific direction for procedures in research study. The author further explains that research methods focus on data collection, analysis and writing, but they originate from disciplines and flow throughout the process of research. Bryman (2012:46) posits that a research method provides a framework for the collection and analysis of data. According to Leedy and Ormrod (2014:151), there are five commonly used qualitative research methods, namely case study, ethnography, phenomenology, grounded theory and content analysis. Creswell (2014:187) highlights that it is recommended that qualitative researchers choose from among the possibilities, such as narrative, phenomenology, ethnography, case study, and grounded theory. The current study employed a case study as a method to be followed to address the objectives of the study.

Van Wynsberghe and Khan (2007:80) define case study as a trans-paradigmatic and trans-disciplinary heuristic that involves the careful delineation of the phenomena for which evidence is being collected. Creswell, (2014: 241) defines case study as a qualitative design in which the researcher explores a programme, event, activity, process or one or more individuals in depth. While, Rule and John (2011: 4) define a case study as a systematic and in-depth investigation of particular instances in its context in order to generate knowledge.

A case study can be useful when a researcher investigates an area of interest, a particular problem or situation in great detail and learns more about a little-known problem or situation (Mohd-Noor 2008:1602; Leedy & Ormrod 2005:135). Similarly, Rule and John (2011) highlight that a case study can be conducted and useful for the following purposes:

- Firstly, they can generate an understanding of and insight into particular instances by providing a thick, rich description of the case and illuminating its relations to its broader contexts.
- Secondly, they can be used to explore a general problem or issue within a limited and focused setting.
- Thirdly, they can be used to generate theoretical insights, either in the form of grounded theory that arises from the case study itself or from developing and testing existing theory with reference to the case.
- Fourthly, a case study must shed light on other similar cases, thus provide a level of a generalisation or transferability.
- Fifthly, case studies can be used for teaching purposes to illuminate broader theoretical and contextual points of view (Rule & John 2011:7).

### **3.4 Population and sampling**

This section focuses at the study population, and sampling techniques used in the study.

#### **3.4.1 Population**

Babbie (2011:117) defines population as a “group of people about which the study wants to draw conclusions and which the researcher would like to be able to generalise a specific sample study to”. Neuman (2006:225) defines target population as a specific pool of cases that the researcher wants to study. Therefore, the target population for this study was middle managers and senior (experienced) employees of a platinum mine in North West province. However, due to on-going unrest in the platinum mines in South Africa, the researcher could not access all the desired targeted population. However, that did not stop the study from continuing because authorities in research methodologies are of the view that qualitative research focuses less on the representativeness of the population rather on digging deep into the research problem.

#### **3.4.2 Sampling**

Onwuegbuzie and Collins (2007:281) define sampling as a process of selecting a portion, piece or segment that is representative of a whole. Neuman (2006:219)

argues that the qualitative research focuses less on the representativeness of the population. According to Neuman (2006:219), the main goal of qualitative research is to get cases or units that illuminate social life or that are relevant to the research. In research, there are two kinds of sampling methods that are commonly used such as probability and non-probability (Leedy & Ormrod 2010:205). It is important to note that qualitative research is associated with non-probability sampling. The most common non-probability sampling techniques are; convenience sampling, quota sampling, snowball sampling, purposive sampling and theoretical sampling (Bryman 2012:201; Sarantakos 2013:177).

#### ***3.4.2.1 Convenient sampling***

Neuman (2011) defines convenient sampling as a non-random sampling technique in which the researcher selects anyone he or she happens to come across. Sarantakos (2013) explains that convenient sampling employs no systematic techniques to choose the respondents. The author further explains that the sample units are usually those people who 'accidentally' come into contact with the researcher. Babbie and Mouton (2011) agree with Neuman (2011) and Sarantakos (2013) that convenient sampling relies on the availability of subjects such as stopping people at a street corner or some other location. The authors also point out that convenient sampling can be justified only if the researcher wants to study the characteristics of people passing the sampling point at a specific time.

#### ***3.4.2.2 Quota sampling***

Quota sampling is a procedure in which the researcher sets a "quota" of the respondents to be chosen from specific population groups by defining the basis of choice and determining its size (Sarantakos 2013: 178). Neuman (2011) defines quota sampling as a non-random sampling technique in which the researcher first identifies general categories into which cases or people will be placed and then selects cases to reach a predetermined number in each category.

#### **3.4.2.3 Snowball sampling**

Snowball sampling is a sampling technique in which the researcher samples initially a small group of people relevant to the research questions and these sampled participants propose other participants who have had the experience or characteristics relevant to the research (Bryman 2012:424). Babbie and Mouton (2011) explain that snowball sampling is appropriate when the members of a special population are difficult to locate such as drug dealers for example.

#### **3.4.2.4 Theoretical sampling**

Sarantakos (2013) defines theoretical sampling as the process of data collection for generating theory. Bryman (2012) explains that theoretical sampling is done in order to discover categories and their properties and to suggest the interrelationships into theory. Sarantakos (2013) explains that a theoretical sampling unit is not chosen by the researcher prior to the commencement of the study, but during the study guided by the knowledge that emerges during the study.

#### **3.4.2.5 Purposive sampling**

Sarantakos (2013) defines purposive sampling as a non-random sampling technique in which researchers choose subjects who are relevant to the project in their opinion. Bryman (2012) defines purposive sampling as a non-probability form of sampling. The goal of purposive sampling is to sample cases or participants in a strategic way, so that those sampled are relevant to the research questions that are being posed.

For this study, purposive sampling was adopted. Purposive sampling is an appropriate sampling technique to use when selecting unique cases that are especially informative. Teddlie and Yu (2007) explain that a purposive sampling technique is primarily used in qualitative studies to allow the researcher to select units purposively (for example, individuals, groups of individuals, institutions) based on specific purposes associated with answering a research study's questions.

This is supported by Bryman (2012) who explains that purposive sampling is conducted in a way that the units of analysis are selected in terms of criteria that will allow the research questions to be answered. Hence, in this study the experienced

employees with knowledge relevant for the study were targeted from the following departments: human resource, talent management, engineering, ICT and Finance. These employees were selected purposively because they were deemed to possess relevant knowledge and would be able to answer the research questions accordingly. Creswell (2013:157) argues that although sample size is critically important in making decisions about a sampling strategy in data collection, a qualitative research is more concerned about getting sufficient data or information. The intention in qualitative research is not to generalise the information or results, but to elucidate a particular aspect.

### **3.5 Data collection tools and procedures**

Data collection is one of the most important aspects of any research project. Creswell (2014:189) argues that the data collection steps include setting the boundaries for the study, collecting information through unstructured or semi-structured interviews and observations, documents, and visual materials as well as establishing the protocol for recording information. Creswell (2009:175) further argues that qualitative researchers tend to collect data in the field at the site where participants experience the issue or problem under study, through examining documents, observing their behaviour or interviewing participants.

Dooley (2002:338) argues that case study research can employ various data collection processes such as participant observations, document analysis, surveys, questionnaires and interviews. Petty, Thomson and Stew (2012:379) state that a variety of data can be collected to help deepen the understanding of the case and in qualitative studies, this is achieved by means of interviews, observations and document analysis. The use of various data collection instruments in a case study help to address the issue of weaknesses in choosing one methodology over the other. In the current study, interviews and document analysis were used to solicit information from the participants who were willing to be interviewed.

#### **3.5.1 The interviews**

Interviews can be used for the collection of straightforward factual information. Denscombe (2007: 174) argues that the potential of an interview instrument as a data collection method is better exploited when it is applied to the exploration of more complex and subtle phenomena. The author explains that when the researcher needs to gain insights into things like people's opinions, feelings, emotions and experiences, interviews will almost certainly provide a more suitable method. Creswell (2013:190) argues that in qualitative interviews, the researcher conducts face-to-face interviews with participants, telephone interviews or engages in focus group interviews with six to eight interviewees in each group. The authors also opine that the interviews usually involve a few unstructured and generally open-ended questions that intend to elicit the views and opinions of the participants.

There are three common types of interview methods used in qualitative research, namely structured interviews, semi-structured interviews as well as unstructured interviews.

#### **3.5.1.1 Structured interviews**

Descombe (2008:175) defines structured interviews as the interview type that involves tight control over the format of the questions and answers. Similarly, Sarantakos (2013:278) describes structured interviews as structured questionnaires that are presented to respondents verbally with the answers recorded in the questionnaire by the interviewer. He explains that when conducting structured interviews, strict adherence to the order and wording of the questions and the instructions is required. Bryman (2012:210) states that the aim is for all interviewees to be given the same context of questioning. When the standardisation of both the asking of questions and the recording of answers is adhered to, a variation in respondents' replies may yield a 'true or real' variation and not due to the interview context. Even though structured interviews can be used to collect qualitative data, they are popularly used to source quantitative data.



### **3.5.1.2 Semi-structured interviews**

Descombe (2008:176) regards semi-structured interviews as a clear list of issues to be addressed and questions to be answered. The author further states that the interviewer is flexible in terms of the order in which the topics are considered and to let the interviewee develop ideas and speak more widely on the issues raised by the researcher. Sarantakos (2013) describes semi-structured interviews as interviews that contain elements of both structured interviews and unstructured interviews. The author also explains that the degree to which interviews are structured depends on the research topic and purpose, resources, methodological standards and preferences, and the type of information sought, which is determined by the research objectives. This technique can be used to collect both qualitative and quantitative data.

### **3.5.1.3 Unstructured interviews**

Unstructured interviews employ unstructured questionnaires containing a number of open-ended questions, whose wording and order can be changed at will (Sarantakos 2013:278). Bryman (2012) explains that the style of questioning is usually informal and the order of the questions can vary from interview to interview. Descombe (2008) adds that during unstructured interviews, the researcher should be as unintrusive as possible. The researcher has to introduce a theme or topic and then let the interviewee develop ideas and speak more freely about the issues.

For the current study, semi-structured interviews were chosen and a list of questions or specific topics to be covered were predetermined, which helped the researcher to ask all the questions with a similar wording for all interviewees (Bryman 2012:471). Mohd-Noor (2008:1604) shares Bryman's (2012) views that semi-structured interviews offer flexibility to approach different respondents in different ways while covering the same areas of data collection. Bryman (2012) highlights that the benefits for using qualitative interviews are good because they produce data, which deal with topics in detail. In addition, the researcher is likely to get valuable insights from the key informants because of their experience and knowledge about the case under investigation.

Although interviews have many benefits, they also have some shortfalls. Bryman (2012) points out that the data from interviews are based on what people say rather than what they do. Doing face-to-face interviews can be an invasion of privacy and unsettling for the informant and the cost of the interviewer's time and travel can be relatively high if the interviewees are geographically dispersed. Again, the interview will be prearranged at the interviewees' time or availability that helps with the issue of privacy invasion. In order to ensure that the data collected during the interviews with participants were recorded accurately and that no data were lost, the researcher used a tape recorder to capture the interviews and all conversations.

### **3.5.2 Content analysis**

Content analysis is a detailed and systematic examination of the contents of a particular body of material for the purpose of identifying patterns, themes, or biases (Leedy & Ormrod 2010: 144). Bryman (2012: 289) states that content analysis is an approach to the analysis of documents and texts (which may be printed or visual) that seek to quantify content in terms of predetermined categories and in a systematic and replicable manner. Content analysis is typically performed on forms of human communication, including books, newspapers, films, television, art, music, videotape, human interactions, transcripts of conversions, and internet blogs and internet board entries. For this study, the company reports, website, procedures and policies about knowledge retention were consulted to get data about the *status quo* of knowledge retention at the platinum mine in North West province.

The advantage of content analysis is that it can allow information to be generated about social groups to which it is difficult to gain access. Content analysis is often referred to favourably as an unobtrusive method, a term devised (by Webb et al. 1997) to refer to a method that does not entail that participants in a study have to take the researcher into account (Bryman 2012:304). Despite some of the advantages, it also has disadvantages. It is difficult to ascertain the answer to 'why' questions through content analysis. Content analytic studies are sometimes accused of being too theoretical.

### 3.6 Data analysis

In all studies, it is a common practice for data analysis to follow data collection. This is the stage where the researcher makes sense of the data collected from the population. Data analysis entails categorising, ordering, manipulating and summarising data to find answers to the research questions (Ngulube 2005:138). Keyton (2006:290) defines data analysis as the process of labelling and breaking down raw data to find patterns, themes, concepts and propositions that exist in the dataset.

Qualitative data is described as data that are in the form of text, written words, phrases or symbols describing or representing people, actions and events in social life (Neuman 2006:457; Descombe 2007: 286). Petty et al. (2012:381) contend that data analysis in qualitative research can be an extremely time-consuming and laborious process because the data is commonly in the form of numerous pages of written words, which need to be analysed and interpreted by the researcher. The authors further contend that there is no computer programme that can be used to undertake the analysis and interpretation of the qualitative data, the researcher still has to analyse the data. According to Leedy and Ormrod (2010), there are five commonly used data analysis methods in a qualitative case study:

- Pattern matching is a characteristic of a testing approach. This strategy boils down to comparing an empirically found score pattern on a number of variables with a predicted theory-based pattern.
- Explanation building is applicable in studying problems of casualty. The purpose is to “explain” a phenomenon and to stipulate a presumed set of casual links about it or “how” or “why” something happened. It is typical of the modern mix of exploration and testing in social research.
- A time series analysis can be applied in a testing or in an exploratory mode.
- Logic models refer to the application of pattern matching on a time series of measurement points in evaluation research. In empirical research, this predicted sequence may be compared with the actual sequence of events. Models may be applied to the levels of macro-units, organisations or individuals.

- A cross case synthesis is a method of combining several independent case studies and perhaps cases across a period of time.

Petty et al. (2012:381) state that qualitative data can be analysed by using the following methods: thematic analysis, discourse analysis, critical discourse analysis, conversation analysis and analysis of narratives. Therefore, the analysis of oral interviews with participants was transcribed in an MS Word document and analysed according to the themes or objectives of the study.

### **3.7 Data quality**

Neuman (2011) points out that the main aim of qualitative research is to get rich data, which have to be gathered systematically. Bryman (2012) explains that the quality of qualitative data can be achieved through trustworthiness and authenticity.

#### **3.7.1 Trustworthiness**

Babbie and Mouton (2010) explain that trustworthiness consists of four criteria, namely credibility, transferability, dependability and confirmability. Trustworthiness, in turn, is made up of four criteria, each of which has an equivalent criterion in quantitative research (Bryman 2012:390; Anney 2014: 276-279):

Credibility, which parallels internal validity; it refers to the confidence that can be placed in the truth of the research findings.

Transferability, which parallels external validity; it refers to the degree to which the results of qualitative research can be transferred to other contexts with other respondents.

Dependability, which parallels reliability referring to the stability of findings over time, based on the way proper procedures have been maintained throughout the process.

Confirmability, which parallels objectivity and is concerned with establishing that data and interpretation of the findings are not figments of the inquirer's imagination, but are clearly derived from the data.

### **3.7.2 Authenticity**

Authenticity is made up of five criteria, namely: fairness, ontological authenticity, educative authenticity, catalytic authenticity and tactical authenticity (Bryman 2012:393).

- Fairness deals with fair representation of all different viewpoints by the participants.
- Ontological authenticity necessitates that the researcher should help the participants to understand their social environment much better
- Educative authenticity requires the researcher to help the participants to appreciate the perspectives of others in the same social setting.
- Catalytic authenticity implies that a researcher should act as catalyst or agent that helps the members to engage in action or research to change their circumstances.
- Tactical authenticity requires the researcher to empower the participants to take the necessary steps to engage in action or research.

### **3.8 Ethical considerations**

As discussed in section 1.10, the Unisa ethics policy (2007) requires any research to comply with the ethical principles. In this study, the researcher applied research ethics as required. For this study, the researcher applied for an ethical clearance letter which had been approved by the postgraduate committee and cleared by Research Ethics Board of Unisa before the study was undertaken. This was in line with the Unisa ethics policy (2007), which specifies that researchers have to avoid undertaking secret or classified research, be competent and accountable, respect human participants and be responsible when doing their research.

Ethics define what is or is not legitimate to do or what “moral” research procedure involves (Neuman 2011:143). Researchers should protect the participants by not disclosing their identity after information has been gathered. Neuman (2011:153) notes that there are two forms that are used to ensure privacy of the respondents and participants, which are anonymity and confidentiality. Anonymity means that people remain anonymous or nameless, whereas, confidentiality means that researchers may

not attach names to information, but must hold it in confidence or keep it secret from the public. In this study, the researcher abided by the principle and requirement of research ethics whereby the participants were informed about the purpose and aims of the study.

It was made clear to the participants that taking part in this study is voluntary and no one is obliged to continue if he or she feels that is unnecessary for whatever reason. The organisation asked to remain anonymous; hence, the researcher assured that both the organisation and participants' anonymity and confidentiality would be maintained. This is in line with Unisa ethics policy, which stipulates that the researcher must always protect the rights, anonymity and confidentiality of participants.

### **3.9 Research evaluation**

This study used a qualitative research approach where case study was used as a research method. The data collection instruments included interviews and document analysis. The use of case study enabled the researcher to investigate the phenomenon in contextual setting. Descombe (2007) explains that case study focuses on a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance. The use of interviews and document analysis enabled the researcher to collect data from different sources and provide an explanation that would not have been possible or give true reflection of the situation or problem had one source been used. This process was not smooth as the researcher encountered some challenges. The main challenge faced in this study was access to the population. Initially, the researcher approached several mines for a permission to conduct a study but without a success. However, the researcher continued to seek permission until one of the mining company allowed the researcher to conduct the study. Another challenge was that some of the participants withdrew during the process without giving clear reasons, despite initially agreeing to be interviewed. However, this problem did not stop the study at all, as the researcher finally obtained the access to the population and interviewed the willing participants. The participants' and organisation's identities were not disclosed in the findings. The researcher promised that the participants and the organisation would be treated as confidential and data would be used for research purposes only.

### **3.10 Summary**

This chapter discussed the research methodology, methods, target population, data collection instruments, data quality and ethical considerations pertaining to the study. It also discussed the methodology used to answer the research objectives outlined in chapter One extensively. The study employed a qualitative research approach and a case study research method was used to address the objectives. The data collection instruments used in this study included interviews and content analysis. The population and sampling techniques used for both methods were explained. The next chapter (Chapter Four) discusses the data presentation.

## **CHAPTER FOUR**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.1 Introduction**

The previous chapter (Chapter Three) discussed the research methodology, techniques and data collection tools and procedures that were used to conduct this study. This chapter (Chapter Four) presents the data collected from the participants using interviews, organisational document review and website. The data will be presented according to the themes that originate from the research objectives. The research objectives themes derived from the theoretical framework of the study are as follows:

- Knowledge-retention strategies, policies and procedures
- The role/use of ICT in knowledge retention
- Role players and support of knowledge-retention initiatives
- Organisational culture and learning organisation

#### **4.2 Background of participants**

Structured interviews with open-ended questions were used in this study, based on the research question to solicit the data from the participants. The research aims and objectives of the study were explained to the participants before the actual interviews were conducted. The participants were informed from the onset that they were free to withdraw from the interviews if they felt uncomfortable at any time during the interview. Participants were requested to determine the venue they would be most comfortable to be interviewed at as well as the dates.

Ten participants were interviewed for the current study. From the ten participants, two were part of management, one represented the HR department and seven were artisans. The following section presents the information from organisational documents review and interview answers from the participants.



### **4.3 Knowledge-retention policies, strategies and procedures**

In order to determine the knowledge-retention policy, strategy and procedures at the platinum mine in North West province, the researcher checked websites, organisational annual reports, strategies and held interviews with participants.

#### **4.3.1 Knowledge as an asset**

Participants were asked whether their organisation recognises knowledge as part of its assets. The following answers were given:

- “The organisation does recognise knowledge as part of its asset.”
- “Any organisation should have knowledge without it, otherwise it will be difficult to do your job.”
- “Yes, it does.”
- “The company hires knowledgeable people in various sections. This is a sign that the organisation has high regard of knowledge.”
- “I don’t know”.
- “At the moment, the organisation does not recognise knowledge as its asset.”
- “Yes, it does recognise it.”
- “I think it does recognise knowledge as part of its asset since there is a policy about knowledge retention”.
- “I’m not sure if it does recognise it”.
- “Yes, the organisation recognises knowledge as part of its asset. “

The participants were further asked about the role knowledge can play in achieving the best results within their organisation. The following responses were given:

- “It plays an important role in improving competitive advantage, innovation, employee development and help in making better decisions.”
- “It helps the employees to make better decisions.”
- “It assists employees on personal development.”
- “It assists on improving competitive advantage and better decision-making.”

Participants agreed that knowledge can play an important role with regard to decision-making, competitive advantage and innovation.

The participants were asked about the risks of losing strategic tacit knowledge possessed by employees in their organisation. The following views were given:

- “It is the loss of production, increases accidents within the organisation, time wasting and properties loss.”
- “Losing someone that has knowledge takes the company downward, because it will affect the company in terms of production.”
- “We are sitting with inexperienced employees skill or labour and managers who make decisions based on feelings”.
- “It is very risky because it affects production and loss of time in the organisation.”
- “The risks are high because change is rapid and competition continues to be intense. Organisations have to always be ready to retain people and knowledge.”
- “It will affect the organisation negatively as it will take the organisation a long time to make decisions and therefore affects productivity. For instance, senior employees often implement the plans of the organisation. “
- “It is a loss in production and time.”

All the participants agreed that the loss of tacit knowledge would affect organisational production time and could increase accidents due to the gap left by experienced employees who left the organisation.

The follow-up question was then asked whether they think it is important to retain such knowledge. The following replies were given:

- “It is important because a better person or worker is the one who has knowledge or knows what he or she is doing rather than having someone new that is still on a learning curve.”

- “It is vital to retain knowledge into the organisation. For example, if the organisation does not produce it will lead us to loss of jobs, as the company will eventually close down.”
- “Yes, so that the employees can learn and gain from it”.
- “Yes, so that the remaining employees can use it to carry on with the duties of the organisation without any loss in production and time.”
- “It is important, but globalisation overrules. Competition is the order of the day. We are living at a time of innovation and create concepts that captivates organisation. Knowledge that is retained has to be evolutionary.”
- “It is necessary that the knowledge is retained into the organisation. This knowledge relates to the long term plans of the organisation. Junior employees rely on their senior employees due to hierarchy in organisations, it is therefore vital to retain strategic tacit knowledge possessed by senior employees.”
- “Yes, knowledge is expensive and rare to find, to retain it is a goal.”

#### **4.3.2 Policy**

The organisational documents review suggests that the organisation has a policy on knowledge retention. The documents contain the following information with regard to knowledge retention:

- “We need employees with the appropriate skills and experience”.
- “In order to maintain a depth of talent it is critical that we invest in talent management and succession planning”.
- “We have a talent management framework in place that helps in predicting talent supply and the interventions necessary to ensure talent availability when it is required”.
- “We will continue to monitor its skilled employee turnover as a measure of retention of skills as well as an indication of the health of the relationship with employees”.
- “Our goal of retaining skilled employees by achieving a skilled employee turnover of 3.5% was achieved in 2015”.

Participants were asked if the organisation has ever faced a high staff turnover and mobility. The follow-up question was asked about the kinds of staff turnover and mobility challenges the organisation has ever faced. The participants stated the following:

- “Resignation of artisans affects the organisation in production loss and time loss.”
- “Resignation, retrenchment and voluntary separations.”
- “No, I’m still very new in the company”.
- “Mostly, resignation.”
- “Resignation and retirement.”
- “Yes, resignation.”
- “The strikes affect the company production and losses in terms of remunerations and value of the platinum. Hence, the company is forced to retrench employees.”

The participants agreed that the organisation had been affected by staff turnover and mobility in the past. One participant mentioned that that he was still new in the organisation.

The follow-up question was asked whether the staff turnover and mobility affected organisational operations. If the answer was yes, they were asked to explain the measures the organisation implemented to stabilise the situation. The following responses were given:

- “Employee turnover and mobility did affect the organisation’s operations. As a result, the company engaged with unions to avoid strikes because it takes the company backwards.”
- “The operations were affected badly. Therefore, the company and employees’ representatives together discussed and agreed on salary increment and that makes a huge difference.”

- “Yes, trial and error measures that are still to bear fruits. Learning organisations seem to respond constructively with informed points of views than organisations that adopt trial and error strategies for coping with the unexpected.”
- “No. I don’t know”.
- “The organisation recruited employees with qualifications and five years’ experience for the vacant positions.”
- “The company improved the salary of employees to stabilise the situation.”

The participants agreed that the staff turnover and mobility affected the organisational operations. The participants also explained that the organisation used money or increased salaries to stabilise the turnover and mobility challenges. However, one participant mentioned that the organisation has not been affected by staff turnover and mobility.

#### **4.3.3 Processes**

The participants were asked about the methods used by their organisation to capture the knowledge of the employees leaving. The following answers were given:

- “The HR has files for each and every employee record which goes to the training centre and they also do keep the employees records.”
- “I don’t know.”
- “By working with someone who can capture the knowledge before leaving, doing interviews for leaving employees and capturing all the procedures in the system.”
- “Exit interview. For the purpose of documentation. Nothing has happened in relation to information captured on the exit interviews that I am aware of.”
- “The organisation uses the exit interviews to capture the knowledge of the leaving employees, as well as the mentor ship of junior employees by senior employees.”
- “Interviews and it depends on how long you have been with the organisation.”

- “I’m not aware of the organisational methods. But, I have been informed by other leaving employees that they have undergone exit interviews. Within our unit, it is the mentoring/meetings mentioned.”

Participants were asked whether those who left the organisation were interviewed in order to capture the knowledge. The follow-up question was asked and if the answer to the question mentioned above was yes, they had to explain how long before the employee left the organisation the interviews were conducted. The following answers were given:

- “It depends on the post and experience of the leaving employee. Interviews are done immediately and some few years before the employee leaves the organisation.”
- “The interviews are started immediately when an employee has served the notice.”
- “No, we don’t do exit interviews”.
- “Usually, it starts from the day you serve the notice.”
- “Leaving employees are interviewed for statistical purposes but has nothing to do knowledge retention. The interviews are normally unstructured and happen a day before the last day or on the last hour before an employee leaves the company”
- “It was done on the last day at work because the employees concerned was leaving or resigning from the organisation.”
- “It is conducted within a week after serving a notice.”
- “It is done when an employee serves a three months’ notice or more. Again, it depends on how long you have been into the organisation and the position you hold. This will allow enough time to transfer the knowledge and information during this period.”

#### **4.4 Role players and support of knowledge-retention initiatives**

This section presents the data from organisational document analysis and participants’ interviews about the role players and knowledge-retention initiatives that the organisation has in place.

#### **4.4.1 Responsibilities of knowledge retention**

The platinum mine's annual report (2015) revealed that some of the responsibilities of the human resource management included:

- developing the miners of tomorrow through youth development, and graduate and bursary programmes and leaderships
- upgrading the skills of the people currently mining our operations
- developing the historically disadvantaged South African leaders of tomorrow through leadership development programmes, internal promotion and succession planning
- increasing the number of women working at mining in our workplace through retention, external recruitment and diversity training.

Participants were asked who is responsible for the retention of knowledge in their organisation. The following responses were given:

- "The management is the one who is responsible for knowledge retention."
- "It is the responsibility of the HR managers."
- "At the moment, it is the responsibility of the management."
- "It is the responsibility of HR to ensure that knowledge is retained into the organisation."
- "I don't know. I assume talent management department".
- "Human resource management is responsible for it."
- "It is the responsibility of foreman engineer, mine overseer and HR management."

The participants were asked how the management or role players support knowledge-retention initiatives. The following responses were given:

- "They introduced a training centre where they teach employees about the policies and procedures of their work. Including aspects of safety and dangers involved in the organisation".

- “There must be a system that will be utilised, transparency to the employees and implementation.”
- “They don’t. They are not looking at it now.”
- “By enforcing procedures, rules and regulations, promoting employees and helping with the skills development for those roles.”
- “Minimal support if there is any at all. I strongly believe that it is industry specific. Some industries have dinosaurs who are not keen to change or transform and they don’t support any initiatives that could reveal their incompetency.”
- “The senior employees are assigned a task to teach the junior employees the technicalities of the work. This helps our organisation to retain the knowledge of the senior employees.”
- “By offering a competitive salary, employee development and a support system.”

The participants were asked about the methods used by their organisation to capture the knowledge of the leaving employees. In addition, the participants were also asked to explain how soon the interviews were conducted or done before the employee leaves the organisation. The following answers were given:

- “Exit interview. For the purpose of documentation. Nothing has happened in relation to information captured on the exit interviews that I am aware of.”
- “The HR has files for each and every employee record. Hence, it easy for HR to capture the knowledge of the leaving employee based on the experience and position.”
- “I don’t know”.
- “By working with someone who can capture the knowledge before leaving, doing interviews for leaving employees and capturing all the procedures in the system.”
- “The organisation uses the exit interviews to capture the knowledge of the leaving employees, as well as mentoring of junior employees by senior employees.”
- “Interviews and it depends on how long you have been with the organisation.”



- “I’m not aware of the organisational methods. But I have been informed by other leaving employees that they have attended an exit interview. Within our unit it is the mentoring/meetings mentioned”.

#### **4.5 The role/use of ICT in knowledge retention**

In order to determine how ICT is used in knowledge retention, the researcher reviewed the organisational documents and interviewed the participants. The following sections present the information from the documents review and participants.

##### **4.5.1 Usage and accessibility**

The platinum mine’s annual report (2015) revealed the following with regard to the role of ICT in knowledge retention:

- Information management technology allows the organisation to provide the right data to the right people at the right time, enable innovation, adapt to a changing business environment, support the achievement of cost-efficiencies, and contribute to our ability to provide a safe workplace.
- Information management strategy, making the right data available to the right people at the right time, which supports productivity.

Participants were asked to mention the ICTs they have access to in their organisation. The following answers were given:

- “There are boards and radios to transmit information among employees.”
- “An intranet.”
- “No, there isn’t anything like that at the moment.”
- “There are notice boards, computer devices and files in place for communication.”
- “Email and internet.”
- “Internet and intranet.”
- “Its computers.”

Participants were asked to mention the technologies used for knowledge storage or preservation in their organisation. The following answers were given:

- “Computers are used for knowledge storage.”
- “There is a filing system and information technology to store knowledge.”
- “No there isn’t anything like that at the moment.”
- “There are files and information technology for capturing the information.”
- “I am not aware of any.”
- “The company uses computers for knowledge storage.”
- “The document files and computers.”

Participants were asked whether the retained knowledge from the departed senior experienced employees is made accessible to the current or remaining employees within the organisation. The follow-up question was also asked that if the answer to the question mentioned above is no, they should also explain the reason/s for that. The following answers were given:

- “No, the company keeps the retained knowledge for unknown purposes. It does not benefit the remaining employees or help to solve recurring challenges.”
- “The organisation makes the retained knowledge accessible to all employees.”
- “No, I don’t know.”
- “The knowledge is accessible.”
- “No, I don’t recall of any knowledge being retained and shared with other employees.”
- “The information or knowledge is only made available to the people or employees that are at higher levels of management in the company.”

Participants were asked how long it takes to get a relevant knowledge document in their organisation. The following answers were given:

- “The documents are not accessible.”
- “It depends on the employee.”
- “No documents.”

- “It depends on what kind of relevant knowledge document is required.”
- “It does not happen.”
- “It depends on an employee, it can take a day.”

#### **4.6 Organisational culture and learning influences on knowledge retention**

The organisational documents review and participants’ responses with regard to the organisational culture and learning is presented below.

##### **4.6.1 Learning culture**

Platinum mine annual report (2015) revealed the following with regard to organisational culture and learning in the organisation:

- The organisation’s aim is to employ and retain high-calibre, high-performing individuals who subscribe to organisation shared values and the culture.
- In order to attract, retain, motivate and reward employees for executing business strategy their remuneration needs to be market related.
- The organisation believes that remuneration should match performance.
- The organisation is committed to a performance management system that allows differentiation between individual and team performance.
- Incentives that recognise and reward operational performance and strategic achievements, where appropriate.

Participants were asked how their organisation encourages employees to learn in order to get new knowledge. The following answers were given:

- “The company always allocates funds for employees to attend courses to better their knowledge.”
- “They send employees to improve academically and learnership scopes.”
- “You can study at your own and they can pay for it.”
- “It is known by all employees that in order to improve your knowledge or position you must study and it is also emphasised in the policy.”

- “The organisation has different departments and different levels of work. It will be disingenuous to throw a blanket statement about the organisation. The organisation might have a great set of values but a different department would decide to do the opposite in short. The organisation encourages employees to learn on paper but reality will tell you a different story.”
- “We have an employees’ development plan in our organisation.”

Participants were asked about the rewards or incentives offered to employees who participate in knowledge retention and transfer initiatives. The following answers were given:

- “The company always ensures that the department meeting the target or doing great gets bonuses.”
- “Workers are promoted when they participate in knowledge-retention initiatives.”
- “None, it is for your own gain.”
- “Employees get promoted and continue to transfer knowledge to the young or junior employees.”
- “Not aware if there are any incentives in existence.”
- “Workers are given vouchers, T-shirts, glasses and jackets.”

Participants were asked about the cultural aspects that affect knowledge retention in their organisation. The following answers were given:

- “The development structures that they are using are not up to the standards.”
- “Sending employees to the academy that does not have accreditation or one with poor facilities.”
- “The information is there but difficult for other people to get access to it.”
- “As a country and nation we have a history which speaks about many cultural aspects in many organisations. Some organisations tend to walk opposite progress and thus continue to affect knowledge retention. Other companies careless about knowledge retention because the market is constricted and

people are stuck. Cultural aspects such as not being ambitious tend to be favourable and thus create a false pretention.”

## **4.7 Summary**

This chapter presented the data findings as derived from interviews, organisational documents and website analysis. The findings were organised according to themes guided by research objectives. This includes the information from both document analysis and the interviews results from the participants.

### **4.7.1 Knowledge-retention policies, strategies and procedures**

It was discovered from the document review that the organisation has knowledge retention in place. It was established that knowledge retention is implemented in some departments, while the other departments do nothing about it. Some of the employees are aware of knowledge-retention policy in the organisation, while other employees are not aware of it.

### **4.7.2 Responsibilities of knowledge retention**

There is confusion about who is responsible for knowledge retention in the organisation. Some of the employees felt that the HR department is the one responsible for knowledge retention, while other employees said talent management or line management like foreman, engineer, mine overseer and so on.

### **4.7.3 The role or use of ICT in knowledge retention**

The employees are aware that ICT is used for knowledge storage, sharing and so on. However, it seems as if the employees are not certain about storage, transferring and sharing of retained knowledge in the organisation. Some employees mentioned that the organisation still uses physical files to store the knowledge.

### **4.7.4 Organisational culture and learning influences on knowledge retention**

The employees were in agreement that there is organisational culture that guides and influences the conduct and behaviour of the employees within the organisation. The

organisation also promotes the learning culture whereby employees are encouraged to study other courses that will enhance their knowledge and help them to perform certain duties effectively. The organisation also committed on rewarding both employees and departments that meet the set targets.

This chapter presented the data findings on knowledge retention. The next chapter (Chapter Five) will analyse and interpret the data findings presented in this chapter.

## **CHAPTER FIVE**

### **INTERPRETATION AND DISCUSSION OF THE RESEARCH FINDINGS**

#### **5.1 Introduction**

The previous chapter presented the data finding from the interviews and documents reviews. This chapter will interpret and discuss the findings that were presented in Chapter Four. The interpretation and discussion of the findings is one of the important parts of the research that seeks to give meaning or make sense of the research findings. Bryman (2012) argues that interpretations and discussions are aimed at reflecting on the implications of the findings on the research questions. The interpretation and discussion of the results in this chapter will be based on themes that are guided by the research questions:

- Knowledge-retention strategies, policies and procedures
- The role/use of ICT in knowledge retention
- Role players and support of knowledge-retention initiatives
- Organisational culture and learning organisation

#### **5.2 Knowledge-retention policies, strategies and procedures**

This objective aimed to determine the knowledge-retention policy, strategy and procedures at platinum mine of North West province, South Africa. The findings on this objective are presented and discussed according to the following sub-themes: knowledge as asset, policy and strategies and processes.

##### **5.2.1 Knowledge as an asset**

Bairi et al. (2011:43) explain that knowledge is a basis that informs an effective action or decision-making in a particular context (organisation). The authors also argue that the loss of knowledge might lead to the decreased capacity for effective action or decision-making within an organisation. Bessick and Naicker (2013) argue that as organisations evolve and render services, their employees gain experience and knowledge about their domain, the competitive environment and the client

requirements. As this body of knowledge grows, it becomes more valuable and develops the characteristics of an asset that needs to be nurtured and utilised. The results show that most of the participants agreed that the organisation recognises knowledge as part of its assets and can play an important role on decision-making, innovation and competitive advantage. However, two of the participants mentioned that the organisation does not recognise the knowledge as part of its assets.

The loss of experienced employees not only affects the human resource management, but also the functional operations and the capability of the organisation to engage in business activities effectively and without problems (Sutherland & Jordaan 2004:56; Bairi et al. 2011; 43). The interview results show that participants agreed that the loss of tacit knowledge would affect organisational production time and can increase the accidents due to the gap that would have been left by the departed experienced employees. They also mentioned that it is necessary and important that knowledge is retained into the organisation so that the remaining employees would make use of it. Bessick and Naicker (2013) argue that in a shrinking economy, the companies that value this asset tend to be more successful than those that have not yet recognised it. This could mean the difference between the survival and failure of a business.

### **5.2.2 Policy**

Ngulube (2003) states that written policies serve as binding contracts between individuals, the organisation and stakeholders. He further stresses that the written policies can help organisations set standards and can be used as tools for staff motivation to create, share and retain knowledge. The organisational documents review suggests that the organisation has a policy on knowledge retention. Again, the document review revealed that the organisation has a talent management framework in place that helps in predicting talent supply and the interventions necessary to ensure talent availability when it is required; and continue to monitor skilled employee turnover as a measure of retention. Although the knowledge-retention policy existed, some participants were not aware of its existence. This might have impact on the way employees participate and commit to knowledge-retention programmes, because, if there is no awareness about a particular programme or initiatives, employees might assume that it is not important and it is not necessary to participate on it.



With regard to the challenge of staff turnover and mobility, Iqbal (2010:278) argues that a high staff turnover can affect the productivity, quality and profitability of the organisation irrespective of its size. The interview results show that the staff turnover and mobility in the organisation was a problem. The staff turnover and mobility in an organisation might result in low production and some critical duties performed by inexperienced or junior employees, which might cause accidents if critical care is not applied. The participants were asked about the intervention the organisation used to stabilise the situation and minimise accidents. The participants indicated that the organisation used money or increased salary to stabilise the employees' turnover and mobility challenges. Liebowitz (2008) contends that knowledge-retention strategies should be implemented or incorporated into the organisation from the beginning, because no one knows when an employee will leave the organisation or take early retirement. This was also supported by Levy (2011) who proposes that knowledge retention should start immediately when an employee has been recruited and continues employment until she or he retires or resigns. Baguma et al. (2014: 487) argue that if the organisation adopt suggestions made by Liebowitz (2008) and Levy (2011), it would help with better management of the knowledge possessed by employees by capturing it and converting that knowledge into organisational knowledge on a day-to-day basis, depending on the organisation's need.

### **5.2.3 Processes**

The findings indicated that the organisation uses predominately exit interviews to capture the knowledge of the leaving employees. However, some of the participants stated that they are not aware of processes to follow or use when capturing the knowledge of the leaving employees from the organisation. Based on these different viewpoints, it seems as if the organisation has no formal knowledge-retention processes put in place to be followed when an employee leaves the organisation. The information was also not available from the document analysed. This kind of practice would result in the loss of a great amount of knowledge when there are formal methods used to retain valuable knowledge in the organisation.

On the issue of the commencement of the retention process, some of the participants mentioned that retention starts as soon as an employee has tendered a resignation, while the other participants stated that knowledge retention is conducted on the last day of an employee in the organisation. From this finding, it seems as if the knowledge retention is done for the sake of fulfilling the obligations and does not fully address the knowledge-retention purpose. It is very important that an organisation should have formal methods to capture the knowledge of the employees and perform this on a regular basis, because no one knows when employees will leave the organisation. Otherwise, waiting for an employee to resign or for their last day could be too little too late. It can result in both valuable assets (employees) and organisation knowledge lost from the organisation.

### **5.3 Role players and support of knowledge-retention initiatives**

This objective aimed to find out who the role players of knowledge retention in the organisation are. The following section presents the findings from organisational document analysis and participant interviews about the role players and knowledge-retention initiatives the organisation has in place.

#### **5.3.1 Responsibilities of knowledge retention**

Thilmany (2008) posits that in order to prevent valuable information accumulated on the job from getting lost in the transition, HR professionals at many companies adopt a different mechanisms to retain employees' know-how and best practices so that the information can be passed on to future employees. Liebowitz (2008:1) states that strategic human capital management has been an important area in recent years within government, industry and academia to find ways to retain employees and knowledge of the experienced employees. As presented in section 4.4.1, the findings show that the participants agreed that HR management or practitioners are responsible for knowledge retention in the organisation, with the exception of the one participant who identified the department of talent management as the one responsible for knowledge retention in the organisation. Based on these different views, it seems as if the employees are not certain about who is actually responsible for knowledge retention in the organisation. Calo (2008) argues that the policies and practices that

are necessary for knowledge transfer to occur reside within the HR function, so the involvement of leadership and HR management is essential. The author further states that the HR should have great incentives in order to develop and implement the necessary policies and practices that will encourage and facilitate the transfer of critical knowledge within the organisation before knowledge is lost and becomes unrecoverable.

### **5.3.2 Support of the knowledge retention initiatives**

Doan et al. (2011: 309) describe top management support as “the degree to which top managers act as role models when participating in knowledge-retention activities and establishing all the necessary conditions for the knowledge-retention process as well as will to provide additional resources if considered necessary. Organisations need to support and provide a context for employees to share the knowledge freely with other employees (Whelan & Carcary 2011:678). The authors further note that strategies for enhancing knowledge creation include practising relevant leadership behaviours such as providing the vision and support for innovation and cultivating an organisation learning culture. The interview results showed that there is differing opinions with regards to the leadership support of knowledge retention initiatives. Some of the participants stated that the leadership or management support knowledge-retention initiatives. However, there were some of the participants that stated that the management or leadership do not fully support knowledge retention. Those who disagreed highlighted that the management do not prioritise or there is less support of knowledge-retention initiatives. It is important for the role players to be fully involved and committed to the knowledge-retention initiatives. This will influence the employees to take the initiatives seriously and commit to the fulfilment of the initiative’s objectives.

## **5.4 THE ROLE/USE OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) ON KNOWLEDGE RETENTION**

The purpose of this objective was to identify the usage of the ICT on capturing, storage and retrieval of the knowledge. In order to determine how the ICT is used in knowledge retention the researcher reviewed the organisational documents and interviewed the participants. The findings on this objective are presented and discussed in the

following section according to sub-theme usage and accessibility of the retained knowledge.

#### **5.4.1 Usage and accessibility**

As discussed in Section 2.3, Bairi, Manohar and Kundu (2011) posit that knowledge retention consists of three activities: knowledge acquisition, storage, and retrieval. These activities are explained as follows:

*Knowledge acquisition describes the practices, processes and tools used to move knowledge into a state where it is kept available for future use (for example to mentor junior employees, capturing instructions on database and so on); storage represents the processes and facilities used to keep knowledge and information until it is needed. Storage entities include individuals, groups, cultures, work processes, tools and systems such as a database; and retrieval includes behaviours, routines and processes used to access and reuse information and knowledge in new situations.*

Dewah (2014) states that ICT tools such as intra nets, email, group ware and data warehousing provide a collaborative framework and help capture, store, disseminate and share knowledge. This was echoed by Harnotovanyi and Ferincz (2015:4) stating that the organisational ICT acts as a socio-technical system that enables individuals to interact through a wide range of devices including voice mail, e-mail, video conferencing, group ware, corporate Intranet and wikis. The Platinum mine annual report (2015) revealed that the organisation uses Information and Communication Technology (ICT) to provide the right data to the right people at the right time; enable innovation; adapt to a changing business environment, support the achievement of cost efficiencies; and contribute to a safe workplace. The findings indicated that there was consensus among most of the participants that have access to Intranet, email, internet, and radios for knowledge sharing in the organisation. And, that the organisation uses computers, and document files to store or preserve the knowledge retained from the departed experienced employees. From these findings, it seems that the organisation has got it right in terms of allowing its employees to use a variety of technologies to share the knowledge.

Information technology (IT) can help organisations to be more efficient and innovative by making knowledge visible and accessible among employees (Harnotovanyi & Ferincz 2015:4). There were different perceptions with regards to the accessibility of the retained knowledge. Most of the participants stated that the organisation makes the retained knowledge available to the employees while some of the participants mentioned that the retained knowledge is not accessible to all the employees. It seems as if there are still other employees or departments that could not access the retained knowledge. This can have a negative impact on the employees who need the retained knowledge of the retired or departed experienced employees to make an informed decision. Hortovanyi and Ferncz (2015) stress that technology is important for facilitating knowledge-sharing between employees, but does not replace the need for continual collaboration between employees.

## **5.5 ORGANISATIONAL CULTURE AND LEARNING INFLUENCE ON KNOWLEDGE RETENTION**

This objective aimed at determining organisational culture that promotes learning and knowledge retention. The findings from the organisational documents review and participants' responses with regards to organisational culture are presented below.

### **5.5.1 Learning culture**

Learning culture is described as an organisational culture that is oriented towards promotion and facilitation of workers' learning, its share and dissemination in order to contribute to organisational development and performance (Rebelo & Gomes 2011: 174). The authors also argue that learning culture through sharing process turns into group learning or organisational learning and in so doing can contribute to organisational success. Platinum mine annual report (2015) revealed that the organisation aims to employ and retain high-calibre, high performing individuals who subscribe to organisations who share values and culture. The annual report further states that the organisation acknowledges that in order to attract, retain, and keep employees motivated, the reward for executing business strategy needs to be market-related. The interview results showed that there was consensus by majority of the participants that the organisation has an employees' development plan in place and always allocate funds for employees to attend courses to acquire new knowledge

which confirms what was established on the platinum mine annual report. However, one of the participant acknowledges that the organisation has employees' development plans and funds allocated for training, but some of the departments just do the lip service. From the document analysis and interview results, where it was established that the organisation has the learning culture, it seems as if some of the departments do not implement it. This might have negative impact on the way employees commit, get involved in knowledge-retention initiatives and sharing of the knowledge.

There were different views with regards to the rewards or incentives that employees receive when they participate in knowledge-retention initiatives. Some of the participants mentioned that employees get promoted and are given incentives like vouchers, t-shirts, jackets and so on. While, other participants stated that they are not aware of any incentives that the organisation gives to employees who participate in knowledge-retention initiatives. It seems as if the communication and implementation of the incentives is not fully adhered to by all the departments in the organisation. Calo (2008) argues that factors such as management support and performance-related rewards are necessary preconditions for knowledge sharing to occur on a voluntary and ongoing basis.

### **5.5.2 Barriers to knowledge retention**

Bessick and Naicker (2013) state that barriers to knowledge retention do exist and organisations need to provide employees with incentives: financial or non-financial rewards, encouragement from management to share knowledge among employees, career development and mentoring programmes to retain knowledge. The authors state that other barriers include work-life policies, work-life conflict, poor salaries, relationships among employees and lack of supervisory support. The findings revealed that there are cultural aspects that affect knowledge retention in the organisation. The participants mentioned that development structures are not up to the standard, training courses are poor and the fact that some departments care less about knowledge-retention initiatives. The unsupportiveness of the leaders or management and poor training courses may result in employees who are unwilling to acquire new knowledge

and share it with other employees. It is important that the organisation should have a culture that supports learning and sharing among employees.

Schmitt et al. (2012:57), argue that organisational culture's processes and structures have been found to be critical for combining and leveraging individual knowledge retention. This is underscored by Calo (2008) arguing that all the best intentions will not achieve the desired results if an organisation's workplace environment and culture do not support knowledge-retention initiatives.

## **5.6 Summary**

This chapter presented the interpretation and discussion of the research findings. The findings suggested that the platinum mine has a knowledge-retention policy in place. However, some of the participants were not aware of its existence. It also highlighted that although the organisation has a knowledge retention policy, it is silent on the knowledge loss in the organisation. HR uses exit interviews as the mechanism of knowledge retention and is done on the last day of an employee's employment in the organisation. The results also suggested that human resource employees are responsible for knowledge retention in the organisation. This is also confirmed by the organogram of the organisation. There were different opinions with regard to the use of ICT on knowledge retention. The results show that some of the participants mentioned that the organisation uses computers and files to retain the knowledge of the departing employee. The other participants mentioned that the exit interview does not entirely focus on knowledge retention as it is done on the last day and is usually unstructured. The captured knowledge is not accessible to all the employees. The participants agreed that there is an organisational culture that encourages employees to share knowledge and continue to acquire knowledge through formal or information learning or taking courses that will enhance the employees' career development. The next chapter provides the summary, conclusions and recommendations of the study.

## **CHAPTER SIX**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **6.1 Introduction**

The previous chapter provided an interpretation and discussion of the findings from the interviews and document analysis. This chapter summarises the research findings and conclusions, and suggests recommendations of the study. Descombe (2008:326) argues that the conclusions and recommendations should draw together the threads of the research to arrive at some general conclusions and give some suggestion for the way forward. The study aimed to investigate the extent to which knowledge retention is practiced in the platinum mine of North West province. The study used qualitative approach to conduct the study. The summary, conclusions and recommendations are based on the discussion from literature review, data presentation, analysis, interpretation and discussions. This is presented according to the objectives of the study, which were as follows.

- To implement knowledge-retention strategies, policies and procedures
- To determine role players and support for knowledge-retention initiatives
- To determine the role/use of ICT in knowledge retention
- To determine organisational culture and learning in knowledge retention

#### **6.2 Summary of the findings**

This section presents a summary of the research findings based on the research objectives outlined above and in Chapter One.

##### **6.2.1 Knowledge-retention policies, strategies and procedures**

The following are the findings of the current study on the knowledge-retention policies, strategies and procedure.

- The results show that the participants agreed that the organisation recognises knowledge as part of its assets and can play an important role on decision-making, innovation and competitive advantage.



- The interview results show that the participants agreed that the loss of tacit knowledge would affect organisational production time and could increase accidents due to the gap that would have been left by the departed experienced employees. They also mentioned that it is necessary and important that knowledge is retained in the organisation so that the remaining employees would make use of it.
- The organisational document review suggests that the organisation has a policy on knowledge retention. It was established through document review that the organisation has a talent management framework in place that helps predict talent supply and the interventions necessary to ensure talent availability when it is required and continues to monitor skilled employee turnover as a measure of retention. This was confirmed by the majority of participants who mentioned that the organisation has a knowledge-retention policy.
- The interview results show that all the participants agreed that they have been affected by the staff turnover and mobility in the organisation. They also explained that the organisation used money or increased salaries to stabilise the situation.
- The results indicated that, usually, when an employee leaves the organisation, the HR employees use exit interviews to capture the knowledge of the leaving employee.

### **6.2.2 Role players and support of knowledge-retention initiatives**

The role players are seen as the champion of any knowledge-retention initiatives. For any knowledge retention to be successful, it needs the involvement and commitment of the role players and support of the management.

- The participants stated that HR management or practitioners are the ones responsible for knowledge retention in the organisation. This is in line with what it was revealed by the Platinum mine annual report (2015) that HR management is responsible for knowledge retention in the organisation. However, some of the participants said that talent management is responsible for knowledge retention.

- There were mix feelings with regard to the support of the knowledge-retention initiatives. Six of the participants stated that the leadership or management support knowledge-retention initiatives. However, four of the participants stated that the management or leadership do not support knowledge retention.

### **6.2.3 The role/use of ICT on knowledge retention**

The use of technologies on knowledge retention is seen as a fundamental tool used by many organisations to help the employees share, retain and store knowledge on databases. The following points summarise the findings from the study about the use of technology in the organisation:

- The interview results indicated there was consensus among participants that employees have access to intranet, email, internet and radios for knowledge sharing in the organisation.
- The results showed there are different perceptions to the accessibility of the retained knowledge. Seven of the participants stated that the organisation should make the retained knowledge available to the employees, while three of the participants stated that the retained knowledge is not accessible to the current employees.

### **6.2.4 Organisational culture and learning influences on knowledge retention**

- The interview results showed that there was consensus among the majority of the participants that the organisation has an employee development plan in place and always allocate funds for employees to attend courses to acquire new knowledge, which confirms what was established on the platinum mine annual report.
- There were different views to the rewards or incentives that employees receive when they participate in knowledge-retention initiatives. Some of the participants mentioned that employees are promoted and are given incentives like vouchers, T-shirts, jackets and so on.

- The participants stated that development structures are not up to the standard, training courses are of poor standard and some departments care less about knowledge retention.

### **6.3 Conclusion about research objectives**

The purpose of the current study was to investigate the extent to which knowledge retention is practiced in the platinum mine of North West province.

#### **6.3.1 Conclusion of the knowledge-retention policies, strategies and procedures**

It is clear from the results that the organisation recognises knowledge as part of its assets and can play an important role in decision-making, innovation and gaining competitive advantage over competitors. However, it seems that the knowledge-retention policy does not clearly state how and when the knowledge possessed by departing employees should be retained back into the organisation. If the knowledge-retention policy is not implemented and distinctly states its objectives, the organisation will continue to lose knowledge (tacit and explicit), which might have a negative impact on production and may result in an increased number of accidents due to poor decision-making. The role player should ensure that the knowledge-retention policy is fully implemented throughout the organisation in order for it to bear fruit that it is designed for.

#### **6.3.2 Conclusion on the role players and support for knowledge-retention initiatives in the organisation**

The support of the role players and organisational management to knowledge-retention initiatives motivates and encourages employees to become involved and participate in the initiatives. It was established that the role players and management do not fully support knowledge retention. As a result, some of the departments fully support knowledge-retention initiatives and others do not support it. In order for the knowledge-retention initiatives to be fully implemented by all the departments in the

organisation, the role player and management need to be involved and support the initiatives from the onset.

### **6.3.3 Conclusion on the role/use of ICT on knowledge retention**

ICT plays an important role in capturing, storing and sharing knowledge in the organisation. If ICT can be used to store and share knowledge possessed by employees, it will help to reduce the loss of valuable knowledge when employees leave through resignation, retirement, lay-offs and so on. Although the interview results indicated that the employees have access to various kinds of technologies in the organisation, the participants expressed that most of the retained knowledge is not accessible to all the employees. This suggests that the use of ICT as a platform for knowledge retention and sharing exists in the organisation, but the retained knowledge is not readily available and accessible to the employees. Thus, the ICT is not serving its purpose of capturing, storing and sharing knowledge among employees in order to fulfil their duties effectively.

### **6.3.4 Conclusion on the organisational culture and learning influences on knowledge retention**

The interview results showed that there was consensus among the majority of the participants that the organisation has an employee development plan in place and always allocate funds for employees to attend courses to acquire new knowledge, which confirms what was established on the platinum mine annual report.

There were different views to the rewards or incentives that employees receive when they participate in knowledge-retention initiatives. Some of the participants mentioned that employees are promoted and are given incentives like vouchers, T-shirts, jackets and so on, while others mentioned that there are no incentives. It seems as if the basis for receiving the rewards and incentives when employees involved are involved in knowledge-retention initiatives is not communicated to all the employees.

It is apparent that there are barriers to knowledge retention due to ineffective organisation culture in the organisation. The participants highlighted that development

structures are not up to the standard, training courses are poor and some departments care less about knowledge retention.

#### **6.4 Recommendations**

The following recommendations are put forward based on the current study findings as well as its scope and limitations.

There is a knowledge-retention policy in the organisation. However, the current knowledge-retention policy is mainly contained in documents and not fully practiced or followed by all the departments in the organisation. This study recommends that the knowledge retention policy be institutionalised and enforced across all the departments in the organisation in order for the policy to achieve its objectives.

The role players should always become involved and support the knowledge-retention initiatives in the organisation. The relationship between role players and management of different departments should be strengthened so that the knowledge-retention programmes could be fully implemented and adhered to in order to achieve the desired results.

ICT should be used for knowledge retention, storage and dissemination in the organisation. This study recommends that the retained knowledge should be made available and accessible to the remaining or current employees so that they can use it to make informed decisions.

It was established that the organisation has a learning and organisational culture in place. However, not all the departments implement it. This study recommends that the organisation culture should be fully implemented and practiced by all the departments all times.

#### **6.5 Further research**

The study used document analysis and interviews to collect data from the participants, which are more qualitative. The current study focused on a single platinum mine in

North West province, South Africa. Hence, a further study where all the platinum mines in North West province and include more participants is recommended.

### **6.6 Implication for theory, policy and practice**

The research findings may influence the policy and practice. If the recommendations are considered, they could help the platinum mine to minimise the knowledge loss and build the institutional memory. The current study has identified some shortfalls in knowledge-retention policies at the platinum mine and contributes by recommending some of the ways that can be used to effectively deal with knowledge loss in the organisation. The study also recommends that knowledge retention should be done at any time when there is a need to do so, rather than waiting for someone to tender a resignation letter or someone who will soon retire. Thus, it will be too late to capture the valuable knowledge of the leaving employees.

### **6.7 Final conclusion**

This study investigated the extent to which knowledge retention is practiced in a platinum mine of North West province, South Africa. The study focused on one platinum mine in North West province. The study recommends a further study that can include as many platinum mines as possible. This will help shed some light on the knowledge retention in the platinum mines of North West province as a whole.

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## APPENDICES

### APPENDIX A: Interview Guide

#### Dear Interviewee

My name is Salmon Makhubela (student no: 44324774) a master's student in the Department of Library and Information Science at UNISA. I am conducting research into "Knowledge retention in the Platinum in North West Province of South Africa". The purpose of the study is to investigate how the platinum mine in the North West province of South Africa retains the knowledge and expertise gained by the employees over the years of service before they leave the company due to retirement, lay-offs, resignation and other factors.

Hence, I kindly ask to do an interview with you. The interview will not take more than 20 minutes of your time. I guarantee you that the information provided will be treated with confidentiality and anonymity. The results of the study will be used for academic purposes only. Your invaluable effort in answering the interview questions would be greatly appreciated.

Thank you in advance.

Yours sincerely,

Salmon Makhubela (Mr).

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## **Interview questions**

### **Title: Knowledge retention in the platinum in mines in South Africa**

#### **Section A: Knowledge retention, strategies and policies**

**Knowledge retention is the capturing of critical knowledge and expertise, which is at risk of loss when employees leave an organization due to retirement, lay off, restructuring, resignation etc.**

1. Does your organisation recognize knowledge as being part of its assets?
2. How significant is the role that knowledge can play in achieving the best result in your organisation?

	Very important	Important	Poor	Very poor
Improving competitive advantage				
innovation				
Employee development				
Better decision making				

3. Do you have a knowledge retention policy in your organisation?
4. How important is the knowledge retention policies and procedures in addressing knowledge loss in your organisation?
5. What are the major sources of knowledge that have to be retained in your organization? (e.g. documents, manuals, experienced/senior employees)
6. What are the risks of losing strategic tacit knowledge possessed by employees in your organisation? (E.g. senior engineers, artisans, HR managers)

7. Do you think, it is important to retain such knowledge? Please explain.
8. Did your organisation ever face staff turnover and mobility challenge in the past few years?
9. What kind of the staff turnover and mobility challenges has your organisation ever faced? (e.g. resignation, retirement, lay-off, transferred to other site/department)
10. Did the staff turnover and mobility affected organisational operations?

Yes	
No	

If yes, what measures did the organisation implemented to stabilise the situations?

### **Section B – Role players and support of knowledge-retention initiatives**

11. Who is responsible for the retention of knowledge in your organisation? (HR, knowledge managers, admin, line supervisors)
12. How do the management and role players support knowledge retention initiatives?
13. Which methods do the organisation use to capture the knowledge of the leaving employees? (e.g. interviews, mentoring young/junior employee, document it on a book, record conversation)
14. Of those who left the organisation, is there anyone who was interviewed by the organisation in order to capture the knowledge?

Yes	
No	

If yes, how soon the interviews were conducted/done before the employee left? (e.g. three years or six months before retirement; exit (last day at work) interview in case of resignation.)

### **Section C - The role of Information and Communication Technology (ICT) in knowledge retention**

15. Which Information Communication Technologies (ICTs) do you have access to in your organisation? (e.g. database, internet, intranet, blog).

16. Which technologies are used for knowledge storage/preservation in your organisation?

17. Is the retained knowledge made accessible to the employees?

Yes	
No	

If no, why is it not accessible to the employees?

18. How long does it take for an employee to get the relevant knowledge document in your organisation?

### **Section D - Organisational culture and learning organisation**

Organisation culture can be referred to as a set of values, beliefs and behaviour pattern that form the core identity of organisation, which assists in shaping employees behaviour.

19. How does your organisation encourage employees to learn in order to get new knowledge?

20. What are the incentives/rewards offered to employees who participate in knowledge-retention and transfer initiatives? (e.g. recognition, promotion, incentives)

21. What cultural aspects do affect knowledge retention in your organisation?

## **Recommendations**

What do you propose should be done to improve any of the following in your organisation?

- a) Knowledge-retention procedures and policies
- b) Knowledge-retention process and transferring to next generation?
- c) The support of knowledge-retention initiatives

**Thank you in advance for your cooperation.**